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COSMETIC SURGERY

THE CORRECTION OF
FEATURAL IMPERFECTIONS

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BY

CHARLES CONRAD MILLER, M.D.

WITH ONE HUNDRED AND FORTY ILLUSTRATIONS

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PREFACE

It will be observed in the text that the writer has given a brief description of local anesthesia by infiltration, but nothing is said of the technic of nerve blocking. If the operator is master of the technic of nerve blocking it may well be used, but the writer does not believe that it should be used unless the surgeon is experienced in its use, for to attempt to master nerve blocking and at the same time do the more or less difficult featural operations here described is to ask too much of the average beginner in this exacting surgery.

Methods of plastic surgery are very old, and study of surgical literature of pre-antiseptic days will convince any thinking man that the great surgeons of the past (and there were many such) recognized and took advantage of quite all of the principles of plastic surgery in general use today. Writings of the old masters in surgery show that brilliant minds gave deliberate and thoughtful attention to plastic operations, and their understanding cannot fail to impress deeply the surgeon who has had any practicable experience. Fundamentally these operators of the past were well acquainted with surgical possibilities which

we use to advantage in doing the operations described in this manual.

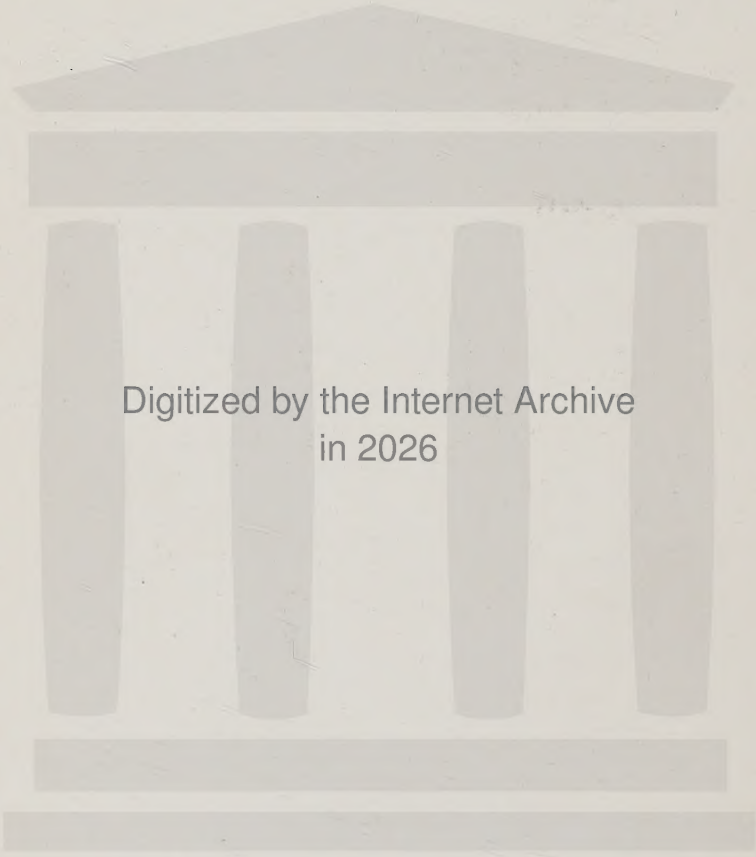
With the varied distractions to which present day operators are subjected, attempts to write are too much disturbed and our books show the effects of the exactions of modern life. Even our best surgeons, when they write upon subjects in which their experience is extensive and their understanding great, are often given to the hasty practice of crediting originality to those writers who in the previous few years have written upon similar subjects. Masterpieces of description in older literature are thus lost, and men who have made inessential changes in details of technic are frequently credited with being originators of operations which they have really had nothing to do with developing.

While it is profitable to flatter contemporaries by alluding to their work, and to give credit freely to those active in the same fields, and such policy often helps to establish congenial and valuable friendships, the writer has disregarded any such opportunities, for the benefit of the text, and has tried to briefly describe operations in a way which he hopes will make such descriptions most useful to his readers. When he has laid claim to originality, the reader should remember that such claims are merely for adapting to particular regions the well-known principles of plastic surgery.

With the tremendous changes in the character of the people, and the developing of a pleasure-loving race in place of the more serious types of the past, there has come more or less of a demand for cosmetic operations. A certain percentage of surgeons wish to take advantage of this demand, but feel more or less handicapped by the lack of accessibility of descriptions of plastic methods applied particularly to this part of the body, so with the hope of being helpful, in the face of possible strictures from the best in the profession, the writer offers these pages to those who may be interested.

C. C. MILLER.

CHICAGO, ILL.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COSMETIC SURGERY.

CHAPTER I.

ANTISEPSIS.

All operations described in this book are performed with local anesthesia. Few special instruments are used and very little assistance is needed. The operations can therefore be performed in the office quite as well as in a hospital operating room. It is necessary only that the surgeon take absolute care as to asepsis. This is possible if he does not hamper himself with unnecessary instruments and appliances. Carefully chosen, a small scalpel, a pair of straight and a pair of curved scissors, a few small hemostats, fine cambric needles, one or two short curved conjunctiva needles, and a glass syringe are all that are required for most of these operations. Instruments should be chosen with the greatest care. They should be kept in absolutely perfect condition. This small handful can be easily kept in order and the surgeon will not need a special assistant to find an instrument when he needs it. The operator who chooses carefully a few instruments and works with them continuously will do

better work than one who clutters the table with a great variety and becomes well acquainted with none.

Methods of aseptic preparation should be carried out with the greatest care, for an ability to secure healing without suppuration is an essential requisite to success in this field of surgical endeavor. The day has passed when mere scrubbing of the patient and of the surgeon's hands and boiling of instruments constitute the best surgical preparation. Antiseptics which years ago lost favor have again come into use and few surgeons make surgical toilets without using one or more antiseptics. The writer does not wish to condemn any form of antiseptic preparation. He feels that his readers are entitled to know some of the measures most generally used by him. Like all operators his technic in preparation of patients has changed from time to time, the object being to have a simple yet absolutely effective, pus-preventing method. The iodin preparation has been used the world over. Modifications without number have been suggested. The writer prefers the official tincture unchanged, painting the field before operation. The use of water before the application of iodin has been condemned. As most women who desire featural operations have considerable quantities of cosmetics upon their faces, it is the custom of the writer to remove these either with soap and water or with ether before the application of iodin. In either case

such removal has not interfered with the success of the iodin painting. When iodin is used care must be taken in dressing wounds not to seal, for under dressings impervious to air iodin is likely to blister.

Complex antiseptic methods which found favor among surgeons during the war are not liked by the writer. When the iodin technic is not used scrubbing followed by the free use of chinosol solutions has proven very effective. This agent seems to have powerful antiseptic properties and at the same time is peculiarly non-irritating. After scrubbing the hands and field, the writer uses strengths of this agent varying from 1 : 1000 to 1 : 5000. In wounds solutions of chinosol in normal salt solution cleanse without causing the least irritation. Operations involving the nasal passages should be preceded by a thorough toilet with this solution. It is also helpful during operation to syringe clots from the field.

Instruments should be kept clean when not in use. Immediately before operation they are boiled and during operation they are kept in order on sterile towels. Some surgeons object to boiling cutting instruments, contending that the edge is affected by this treatment. The correct type of cutting edge will stand boiling. The surgeon should have at hand a carborundum razor hone. This will put upon a scalpel an edge which allows accurate incising. Such edge is not so fine that it is materially blunted by

boiling, provided the scalpel be a good one. For featural surgery the operator cannot take too great care in selecting all cutting instruments.

Suture materials should be obtained in sterile tanks or tubes of such type that they can be boiled each time they are used. It is only by taking extreme care in all operations that aseptic healing will invariably occur. Suppuration may be nothing less than a calamity and the surgeon who is unwilling to take extreme care to avoid infection should refrain from this kind of surgery.

CHAPTER II.

LOCAL ANESTHESIA.

Books have been written upon the subject of local anesthesia and the surgeon who intends to practice in the cosmetic field should thoroughly master the technic for securing an insensitive condition of parts to be operated upon. Featural surgery is most exacting, haste is inimical to really good surgery, and it is to the surgeon's advantage to know not only how to secure a thoroughly benumbed surgical field but to know why as well. An exhaustive consideration of the subject of local anesthesia not only goes fully into the manner of infiltrating, the various drugs used and their preparation, but also explains the reason why they are effective. Here certain bare essentials of methods used by the writer will be described.

Solutions of novocain or cocain have for years been preferred by the writer to all others. Strengths vary according to the operation to be performed. When thorough distention of the tissues is not objectionable dilute solutions are used. A very weak solution of cocain or novocain (1 : 500) will entirely deaden tissues if the parts are distended sufficiently. These dilutions should be made up in normal salt

solution. When distention of the tissues is objectionable as it may alter relations of parts which it is important to preserve, stronger solutions varying from 1 to 2 per cent. are used. Such solutions injected in small amount will, after the lapse of a few moments, produce analgesia over a considerable area.

For injection all-glass syringes with slip-on needles are used. Small needles should be chosen as most patients cannot refrain from watching the surgeon, and the larger needles add to the nervousness of such patients. When very weak solutions are used in infiltrating the needle is introduced under the surface but not through the skin. The layers of the skin at the point of the needle are thoroughly distended, the needle is pushed to the edge of the distended area and another injection made. In this way the field is enlarged until the area to be incised is distended. The surgeon should then test before incising to make sure that he can operate without causing the patient discomfort, as good work cannot be done unless it is done painlessly. From the standpoint of feeling, the parts must be dead; then only can the surgeon operate with that deliberate care which is essential to good work in this field. A disturbed surgeon, a poorly made incision, a few badly placed stitches may mar what might otherwise be a perfect operative success. In operations involving bones when overlying tissues are thoroughly deadened, the bone itself

may be chiselled or rasped away without pain to the patient.

In the more extensive operations the surgeon should gauge the strength of his infiltrating solution by the amount he will need for performing the operation. In other words, if it requires four ounces of infiltrating solution this amount of normal salt solution should be taken and a safe dose of novocain or cocain added to it. In this way the surgeon does not exceed that amount of the drug which is safe.

Infiltrating solutions should be freshly prepared and should be absolutely sterile.

General anesthetics cannot be given without actual danger to the patient. For this reason it is well to avoid general anesthesia. As these operations are painlessly performed with local anesthesia, nervous patients tactfully handled can be operated upon without difficulty, and the surgeon who insists that patients submit to these operations under local anesthesia will find very few patients who are troublesome after the operation is well started.

CHAPTER III.

HEMORRHAGE.

Hemorrhage during featural operations is not to be feared, although the tissues of the face are very freely supplied with blood. Open incisions bleed copiously if preventive measures are not employed. The featural surgeon soon learns that it is advantageous in several ways to prevent much bleeding. First of all, most patients submitting to such operations are women with more than the usual amount of "nerves." It behooves the surgeon to prevent as much as possible those occurrences which tend to alarm such patients. Nothing is quite so harrowing to women or men unaccustomed to the sight of blood as to discover during an operation that they are losing quantities of blood. Nervousness of the surgeon or assistant, abrupt movements, sudden noises, all disturb the morale of the patient, but such incidents are of minor importance compared with the sight by the patient of quantities of blood being lost during operation. Styptics are of little value in cosmetic operations, either those topically applied or solutions which are mixed with the the infiltrating solutions, and which are expected to temporarily contract arterioles and check hemorrhage. The agent

most frequently used is the solution of extract of the suprarenal gland. Personally the writer cares little for such compounds.

Compression is the most effective way of controlling bleeding. This is applied in several different ways and the surgeon who would please his patients and make possible deliberate, precise operations should utilize such measures effectually.

Pressure beyond the limits of the wound may be useful in certain operations. In face lifting from the supra-frontal region and lifts in the temporal region a rubber cord may be fastened securely about the head just above the ears. This compression will check most of the bleeding during the time the surgeon is making his primary incisions. This method has the disadvantage that blood-vessels must be caught very quickly when the rubber band is loosened, as numerous vessels start bleeding at the same time. The first flush of blood which occurs when these vascular areas are incised is prevented by the rubber cord about the head and after excisions have been made to the satisfaction of the surgeon the band can be loosened tentatively and the vessels inclined to spurt may be snapped with forceps. In conjunction with the cord about the head direct compression with a pad may be used by the assistant when the cord is loosened.

In operations in certain regions compression beyond the limits of the surgeon's knife may be affected by the fingers of the assistant or by compression strips moulded from rather heavy strips of sheet lead. This method may be used, for example, in operations on the nasal tip or upon humps upon the bridge. Tissues divided in these operations are vascular to the extreme, and compression beyond the limits of the wounds may do much to check such bleeding.

Sometimes operators gain the impression that by allowing the blood to flow down through the nose into the pharynx the patient will not suspect the loss of blood. Very few patients will fail to detect such bleeding, and when they find blood flowing into the pharynx, nine out of ten will refuse to swallow it but insist upon sitting up at frequent intervals to spit it out. To prevent occurrences of this kind it is the writer's custom to pack both nasal passages before beginning these operations. The escape of blood through the nostrils can be prevented either by compression of the tissues across the bridge of the nose by the fingers of the assistant or with properly shaped strips of lead. These strips can be formed before operation to fit the face of the patient. Such a strip should cross the nose above the hump or the tip, depending upon which part of the nose is to be operated upon. This strip is formed to fit firmly

against the side of the nose and to extend downward until it presses upon the superior maxilla on each side just above the teeth. Such an appliance may be held firmly against the face by the assistant using only one hand, leaving his other hand free to aid the operator.

Direct compression of the wound as fast as it is made by the surgeon is the best method of controlling bleeding. This technic should be systematically developed. It requires careful training of the assistant, but the surgeon will be well repaid for the trouble when the assistant becomes proficient in following the surgeon in these operations. When the surgeon begins an incision the assistant should have a small compression pad in one hand and as the surgeon's knife passes through the tissues this pad is rolled along immediately following the knife. As the tissues are divided they are immediately compressed.

When care is taken by the assistant, the knife can be very closely followed without distorting the tissues and in no way interfering with the surgeon, and bleeding is controlled to a degree which is startling to the uninitiated. As most of the vessels divided in these operations are small only a few moments' compression is required to allow them to close. Therefore, as the surgeon proceeds and the incised tissues are prevented from bleeding, not only is blood prevented from flowing at the time but it is

controlled in such a manner as to prevent its being lost at all.

When two sides of the face are to be operated upon, the surgeon does his cutting on one side and the assistant compresses the tissues. While this compression is continued the surgeon makes his incision on the opposite side. When the division of tissues is complete upon the second side, the operator returns to the first wound and is ready to control any bleeding which may follow raising the compression pad. The compression pad is turned up, beginning over the area first incised. The pad is really rolled up, and as the wound is exposed any bleeding points are spotted and snapped with hemostats. The entire incised area or areas are thus exposed and as bleeding points show they are controlled.

By the effective use of pads, as described, segments of tissue can be excised from the face or neck with the loss of very little blood. If such method were not used, the blood would saturate all surrounding towels and the field would indeed be a mess. By this method the surgeon has his operation absolutely in hand at all times and he can work rapidly without being hurried.

When pads are lifted and all spurting points or other persistently bleeding vessels are caught with hemostats it remains for the operator to decide how to dispose of the hemostats. Ligation of small ves-

sels is objectionable from several standpoints. First of all, it takes too much time. Second, it leaves foreign materials to be disposed of. Buried ligatures are objectionable in several ways. They interfere with exact approximation in some cases. They predispose to suppuration and they may cause the deposit of an infiltrate which is very slow to disappear.

For this reason torsion has many advantages over ligation for the control of small vessels which persist in bleeding when snap forceps are removed. Torsion was the favorite method of controlling bleeding by the old time surgeons. This was due to the fact that ligatures used many years ago were of silk, linen or cotton and did not absorb. Besides, they favored the development of infection immediately about the vessels tied and this made the surgeon fear greatly secondary hemorrhage. This frequently came on days after the operation and in amputations might be followed by fatal results. Torsion was so well thought of by surgeons in pre-antiseptic days that vessels as large as the femoral artery were treated by torsion rather than by ligation. The absorbable ligature and the prevention of infection of wounds marked the decadence of torsion, but this old-fashioned method, which is both quick and effective for small vessels, may serve the cosmetic surgeon to very good advantage.

Torsion requires a little care, and it cannot be mastered in a day. The ordinary hemostat can be used by the featural surgeon in practicing torsion. The technic here is not such as was used by old-time surgeons in twisting large vessels. These operators drew the vessel well out of its sheath, compressed it with one pair of forceps, and steadied it, while they twisted with a second pair, which grasped firmly the tip of the severed vessel. The featural surgeon merely draws out the tissues in the grasp of his snap forceps, twists them carefully until he feels the slightest giving. If twisting were continued the tissues in the grasp of the forceps would be twisted off. At just the right moment, if the surgeon loosen his forceps, it will be found that the bleeding has been controlled. What has happened is that the delicate intima, the inner wall of the bleeding vessel, has ruptured and curled inward closing the orifice through which the bleeding occurred. Should the twisting be continued too far, the support of the tissues will be removed, the slight curling which holds the blood before a clot has formed will be insufficient and the blood will begin to flow again. It is, therefore, necessary for the surgeon to learn not to twist off the tissue in the grasp of the forceps or to twist enough to remove their temporary support.

Sutures are frequently utilized by general surgeons for controlling bleeding. The wound while still

bleeding is sutured and the sutures drawn tightly so as to compress the tissues. Such methods cannot be practiced upon the face with good results. No stitch which exerts enough compression to check bleeding will give the kind of approximation which the featural surgeon desires. No stitch drawn tight enough to control any amount of persistent bleeding will fail to cut to a degree which will leave a noticeable stitch mark. It, therefore, behooves the surgeon not to utilize this method upon operations involving the face.

In excisions involving the temporal region and in operations above the hairline of the forehead, stitch marks are hidden by the hair. Here the surgeon may, if he elects, use sutures to control bleeding, though it is the belief of the writer that such technic even here is uncalled for. The excisions in these areas involve the skin and subcutaneous tissues down to the loose areolar tissue immediately over the pericranium. This is the so-called dangerous area of the scalp. This is an area which is easily and widely undermined by pus and blood. If the sutures control external bleeding but do not prevent oozing this blood may flow along under the scalp, and such blood in this region may easily become infected. It is, therefore, better surgery in these cases as well as in face cases to control all bleeding before closing the wound.

CHAPTER IV.

THE HEAD.

The plastic surgeon who would alter the physical appearance in a manner which will be pleasing to the majority of people will find it advantageous to consider not only individual features but the head as a whole. The head of a man of average height measures approximately one-eighth of this total. Women have more immature appearing heads and faces, more nearly resembling those of children. The woman of average height has a head which measures approximately ten seventy-fifths of the total height. The proportionate size of the head is smaller in tall people. Gross deviations from the average are seldom pleasing. The proportion of the face to the cranium may vary considerably. In the baby the natural state is to have a cranium which is very large and a face which is small in proportion. Mental defectives have frequently unusually large faces in proportion to the cranium.

As the infant grows the head and face enlarge as the result of the growth and development of certain bones and cavities. As old age approaches there is a marked tendency to lose the teeth, following which absorption of the alveolar processes diminishes the

size of the lower face, giving the characteristic appearance of old age. To women the preservation of the teeth is all-important in staying the atrophy which will give the appearance of added years, for in women the lower face is small in proportion to the rest of the face and with the loss of the teeth and the absorption of the alveolar processes the effect on the appearance may be extreme.

Books which go into detail regarding the different types of faces and heads, which study races and racial types, and others in which the study of man from the mental standpoint is taken up are of great interest to the student of this kind of surgery.

The Scalp.

The skin of the upper face and scalp differs from that of other parts of the body. This is of particular interest to the featural surgeon as it favors greatly the success of the various "lifting" operations.

The scalp is made up of five layers, the first three being intimately blended forming, from a surgical standpoint, a single layer. In the outer layer the skin is thicker than in many other parts of the body; in the second layer, the subcutaneous tissues are well developed, being made up of strong fibrous bands intimately connected with the overlying skin; the third layer is made up of firm aponeurotic tissues.

These well-developed, intimately connected tissues are cut through in performing the various lifting operations. They may be drawn together under firm tension and when tension plates or buttons are used, the stitches under tension cut slowly so that union can be secured even after considerable tissue is excised.

Below the three layers described is the loose areolar tissue and below this the periosteum, which when covering the cranium is known as the pericranium. The vascularity of the scalp is very great, the blood-vessels anastomosing freely so that sloughing is very unlikely if infection is prevented. Blood-vessels running through the layers of the scalp are so held by the connective fibers about them that contraction and closure is less perfect and occurs more slowly when the vessels are severed so that twisting of the points from which bleeding occurs is more often required than in other tissues.

CHAPTER V.

FOLDS, BAGS AND WRINKLES ABOUT THE EYES.

Folds, bags and wrinkles about the eyes represent a diverse group of changes in the skin of this region. An enumeration of each particular type of change would develop the subject in greater detail than is necessary for a good understanding of the methods of correction used by the writer.

While many people who formerly opposed operations for taking up slack in the skin of the face have come to admit that "face lifts" may be safely performed with striking results, many of these same people still object to operations about the eye, contending that there are elements of risk of disfigurement or bad result. Such is not really the case. Methods for removal of tissues about the eyes are the development of many years. Surgeons in all large centers of population do these operations successfully, but not much has been written for the medical press, as such writings have been likely to invite criticism of the writer. Surgeons who consider such operations favorably may find in the writer's suggestions matter which will interest them.

Changes about the eyes are the result of time, habits of muscular contraction or ill health. Cer-

tain types predispose to this bagginess and wrinkling. Unless the conditions are due to a type of

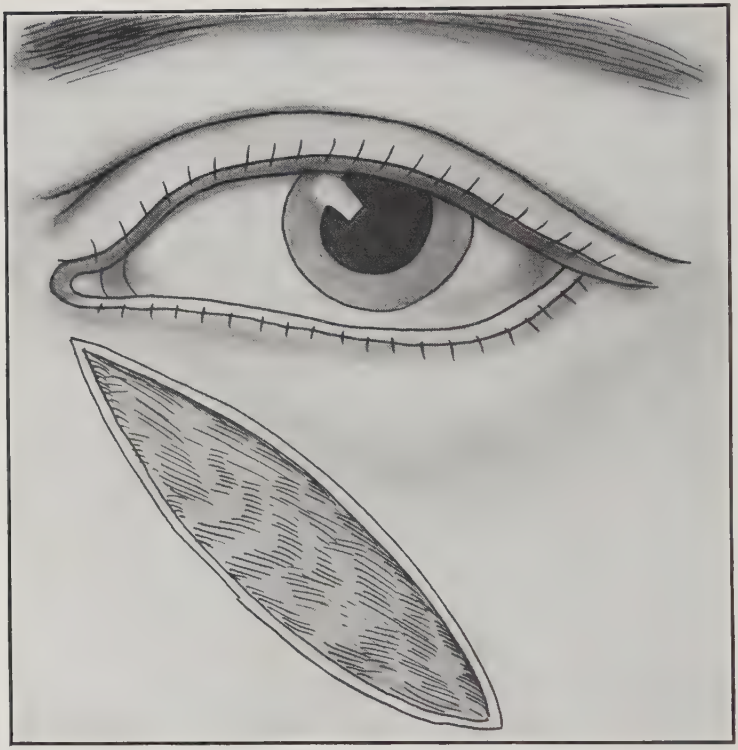

Fig. 1.—Operations originally performed for undue fullness beneath the eyes were performed by excising tissues at points distant from the eye. There is a tendency in most people to form a natural line extending downward and outward from the inner canthus. This line has frequently been selected as the point for excision of excess tissues.

squinting little can be done in the way of prevention. Massage, plasters, drugs or other skin treatments are

either impotent or actually tend to increase the condition. Surgery offers a way out.

Carefully performed, these operations about the

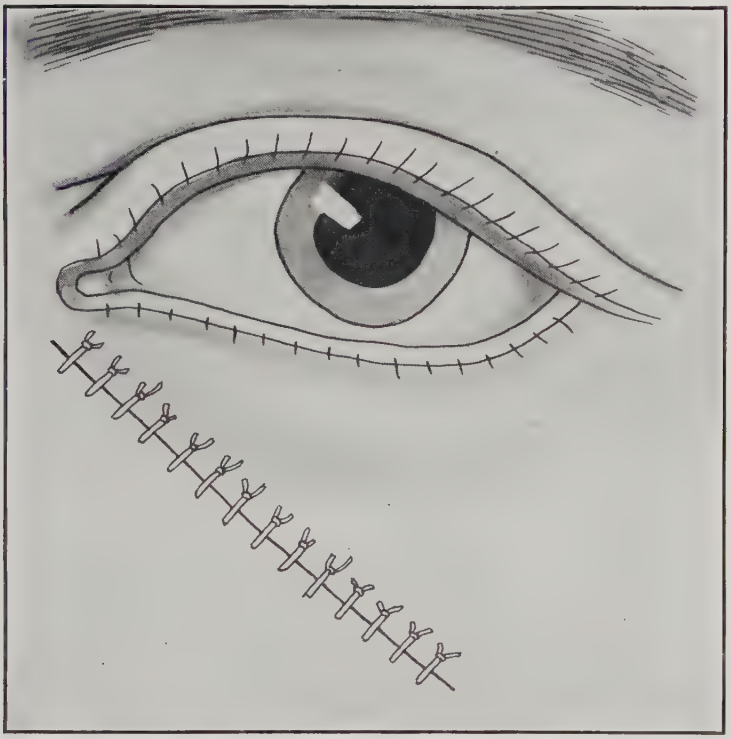

Fig. 2.—Closure of wounds in exposed parts of the face is best accomplished with fine silk sutures closely placed. These sutures should be drawn together with great care to secure perfect approximation without undue tension.

eyes are perfectly safe. Seldom indeed are the cases which cannot be relieved by operations so performed that scar lines are shadowed so as to be invisible to

close observers. Many years ago, when this type of plastic surgery first attracted the surgeon, operations were performed without attempting to hide the scar.

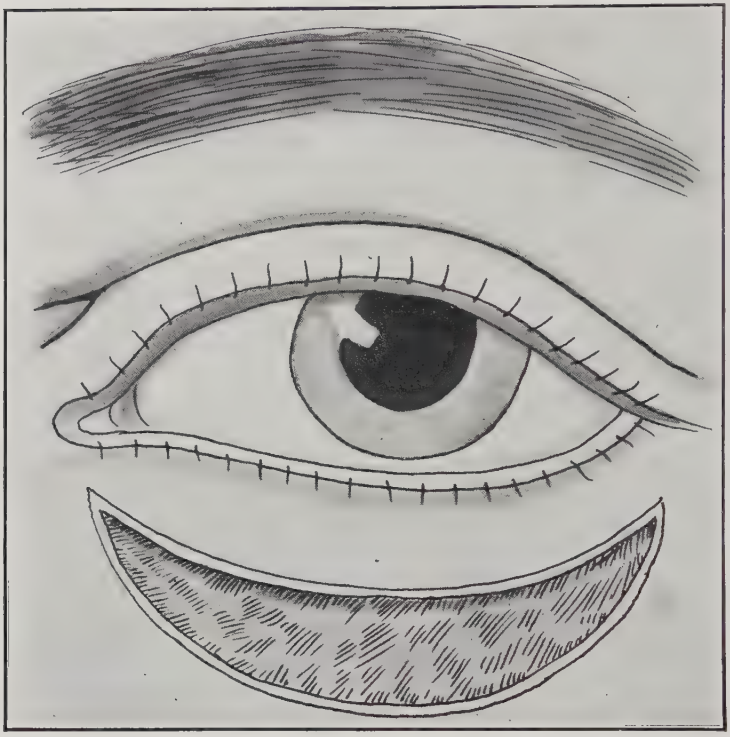

Fig. 3.—Another type of excision distant from the lid margins. Some surgeons insist on avoiding the lid margins in operations for folds, bags and wrinkles about the eyes. Carefully made excisions properly closed do not leave a conspicuous scar line.

A crescent or an ellipse of tissue was removed well below the eye, the line of union in one case being crescentic below the eye and in the other obliquely

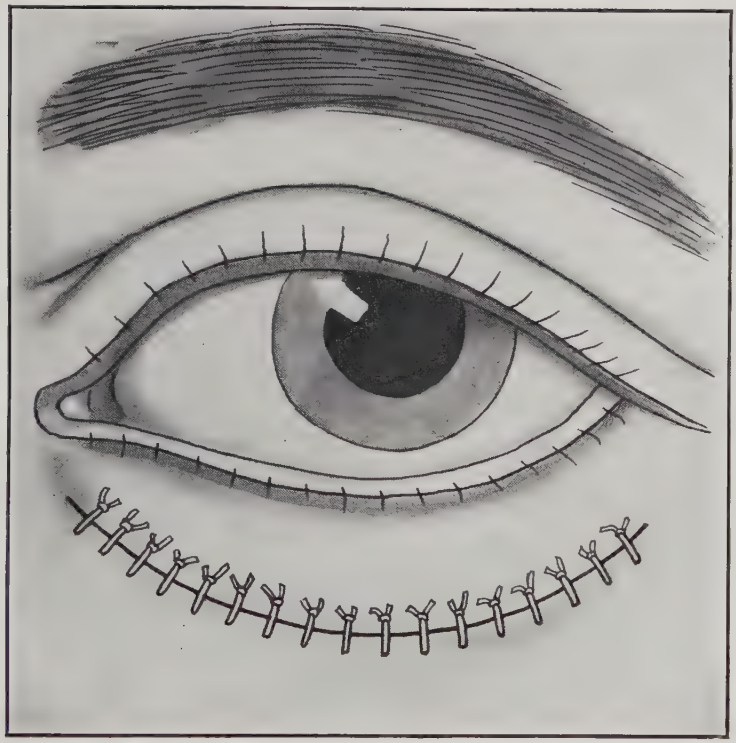

Fig. 4.—The closure after excision of a crescent below the eye must be made with great care. Sutures should be of fine non-absorbable material. The stitches should be passed just to the depth of the wound. If a large mass of tissue is included in a stitch, more tension is required to effect closure, and tension always increases the danger of stitch marks. The usual way of taking deep bites with the needle and tying sutures tightly should be avoided by the surgeon in these operations on the face.

downward and outward from the inner canthus. Even today such operations are practiced by surgeons who fear to approach too close to the lid margins.

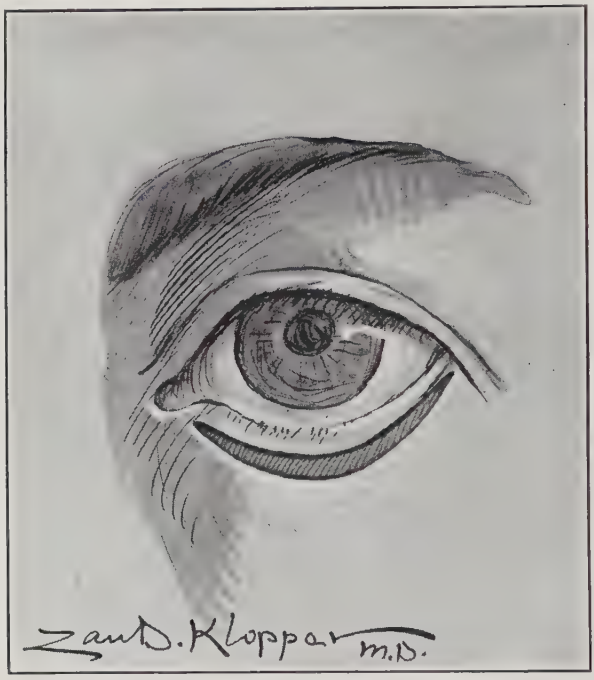

Fig. 5.—Originally in performing operations below the eye a narrow strip only was excised. Some surgeons persist in making the excision along the base of the lid. This operation is not nearly as effective as the excisions close to the lashes.

There is no harm to be feared from operation along the lid margins. Tendencies to ectropion may be prevented by methods which are safe and effective. Injury to the eye or effect upon the sight need not

be feared. Excisions close along the lid border allow shading of the line of union by the lashes and in this operative choice the scar so blends with the lid margin that it will pass close scrutiny without being noticed.

Fig. 6.—Illustrating operation completed.

Prevention of infection, very smooth, even excision of the tissues and absolutely accurate approximation of the wound edges are essential to success and the surgeon should in all these cases take more than ordinary care to attain perfection of lines of union.

Analgesia must be complete to allow careful unhurried operations. As the surgeon is likely to be disturbed by altered relations infiltration with weak

solutions should be discarded for the older practice of injecting strong solutions of cocain or novocain.

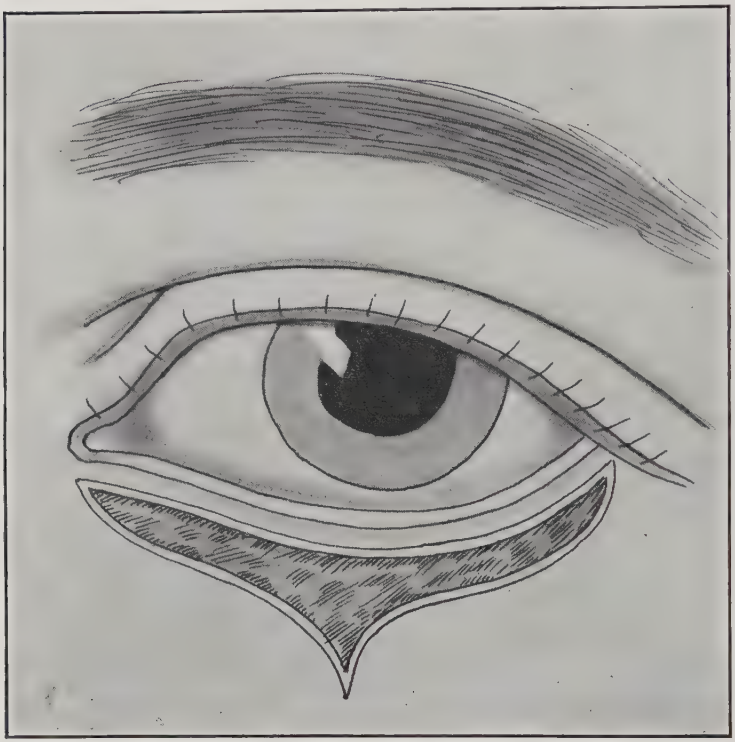

Fig. 7.—Operation for excision of fullness of skin beneath the eye. The surgeon above goes very close to the free margin of the lid. When a wide area of skin is excised eversion of the lid would occur if steps were not taken to prevent it. In this operation a wedge is taken below. This when drawn together counteracts the everting tendency of the excision.

A small amount of two or four per cent. solution injected along the border of the lid will in a few

moments produce insensitiveness to pain. These small injections do not bulge the tissues or materi-

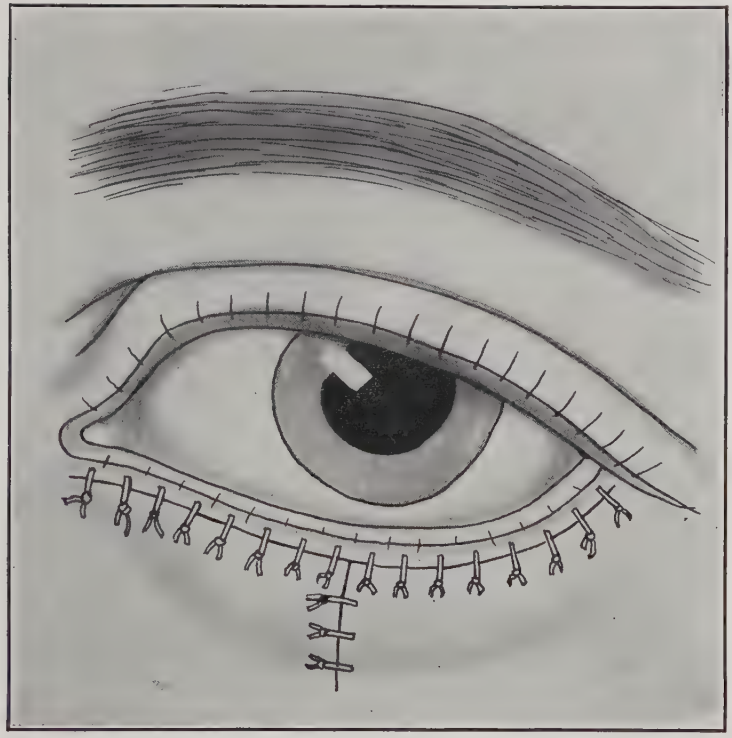

Fig. 8.—Manner of closing wound. The transverse line of wound union is so close to the lashes as to be effectually shaded.

ally alter the relations. Nerve blocking may also be used.

When there is a general bagginess or wrinkling under the eyes, the first incision should be close under the lashes. A very sharp scalpel is the best instru-

ment to use in making this incision. The lid can be steadied by light pressure with the index finger and the incision should be carefully made so that irregu-

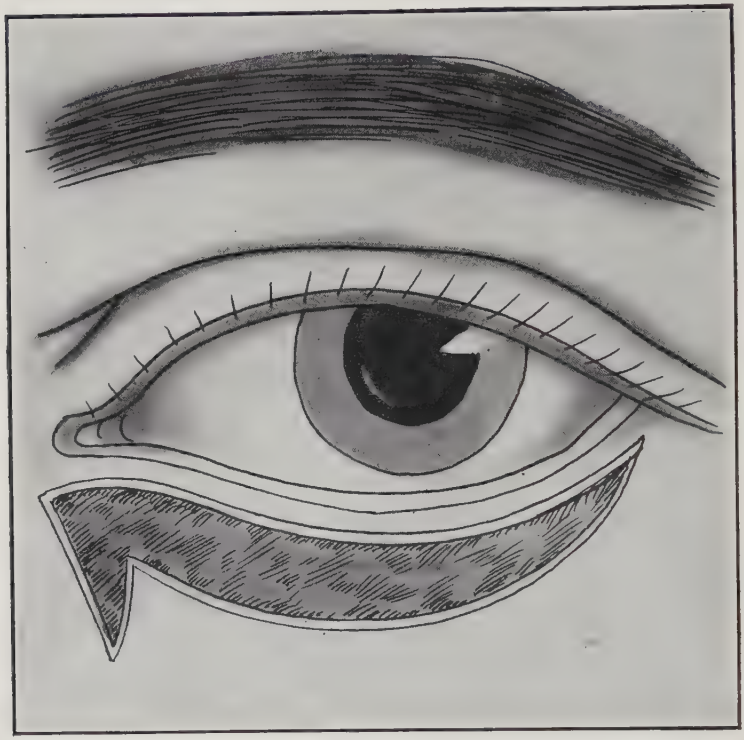

Fig. 9.—After excising below the lid margin tissues necessary to overcome folds, bags, or wrinkles, a wedge may be removed at the inner canthus and the line of union away from the shadow of the lashes may be so formed as to correspond more or less to the natural line sometimes seen at this point.

larity is avoided. The surgeon then marks off the amount of skin he is to excise with the point of his

scalpel, cutting through skin with a careful even stroke. A corner of the skin so marked off is then

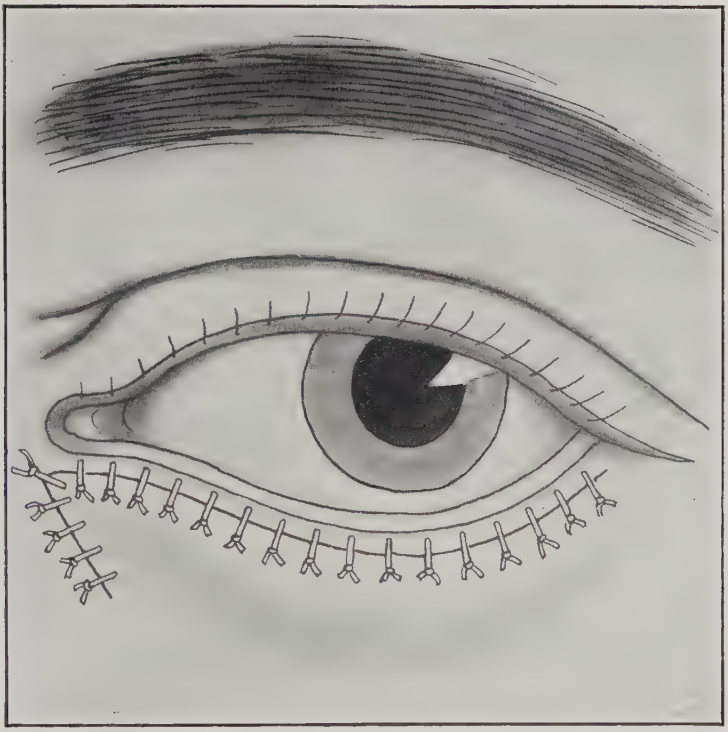

Fig. 10.—Illustrates manner of closing with interrupted sutures. Fine silk should be used and sutures removed within seventy-two hours.

loosened and the segment carefully lifted and removed.

If much blood suffuses the wound the assistant may follow the surgeon with a small compression

pad. When the first incision is made and the bleeding is at all sharp, the compression pad in the hands of an assistant will control it and the operator can

Fig. 11.—To prevent eversion after excision below the eye in some cases a wedge can be removed to the best advantage at the external angle of the wound. The line of closure can be so formed as to closely resemble the natural line at this point.

turn to the other eye and make his excision during the time the compression pad over the eye first operated upon is controlling the bleeding. In the second

area the surgeon has the assistant follow his scalpel with a compression pad and while this area is being compressed the pad over the first wound is slowly

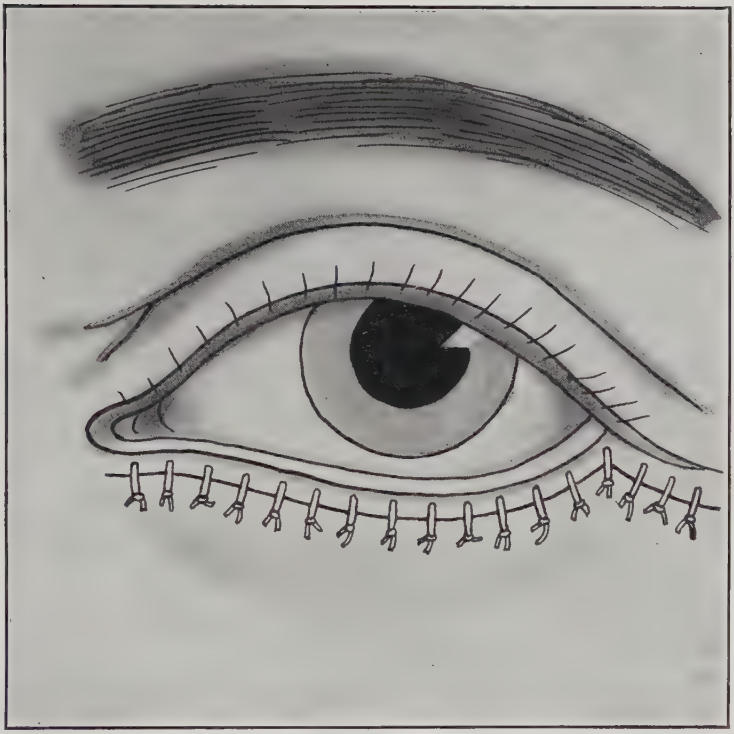

Fig. 12.—Illustrating operation completed.

turned up. The surgeon spots any bleeding points, nips them with hemostats and twists them if it appears that a few moments pressure will not control them. When all bleeding points are controlled the second area is similarly treated. By this time hemo-

stats which are in the way may be removed from the field first exposed and the surgeon can tentatively draw up his tissues to see if the bagginess will be

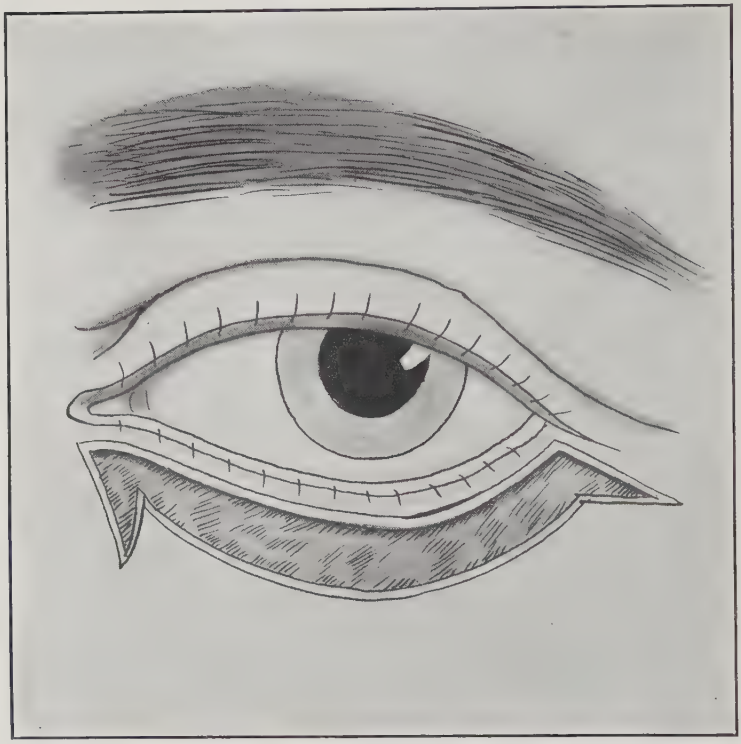

Fig. 13.—To avoid excision of a large wedge small wedges of tissue may be excised at each wound end.

overcome. If more tissues need to be removed sharp scissors may be used and the edges of the skin carefully cut away. So, too, if there is likely to be any eversion, segments of skin may be removed to make

possible the drawing up of the tissues without causing eversion. When the amount of skin removed from below the eye is small there may be no tend-

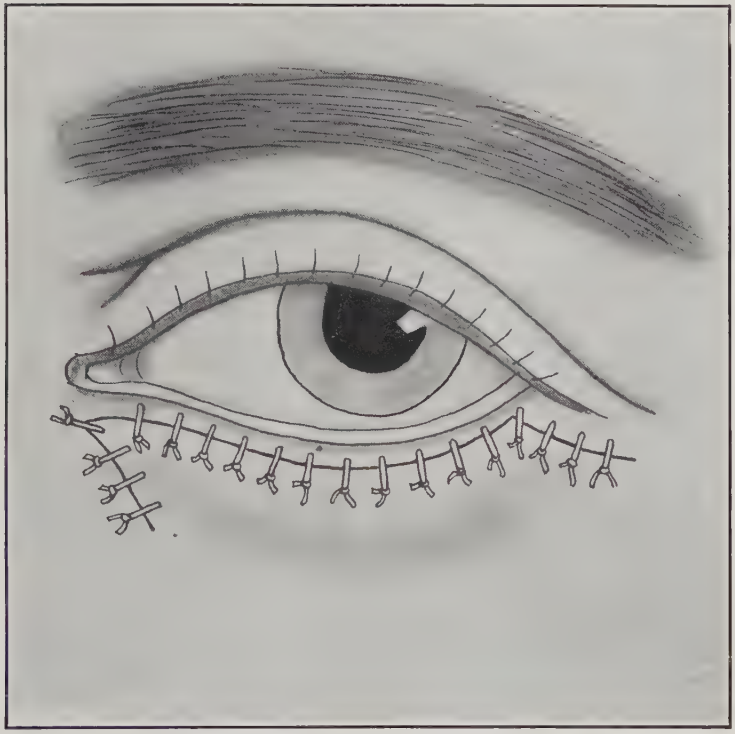

Fig. 14.—Operation completed.

ency to eversion of the lid and the crescent space so formed is ready for suturing as soon as all bleeding is controlled. A very small amount of suprarenal extract will temporarily check bleeding when used in the infiltrating solution. If it is used the surgeon

should operate deliberately so that its effects will have disappeared before the sutures are tied.

The skin should be closed with interrupted sutures

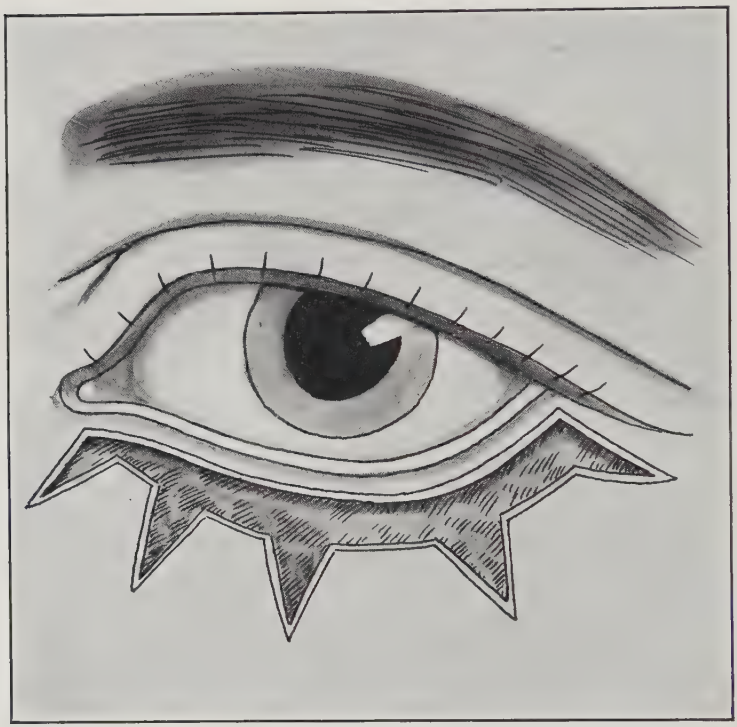

Fig. 15.—Several small wedges may be removed to prevent eversion of the lid. When considerable tissue must be removed this may prove the best procedure.

of fine silk on cambric needles. The sutures should be placed close together so that when tied with barely sufficient tension to draw the skin edges together there will be no gaping of the edges. They must be

placed with the most absolute accuracy. An uneven union may greatly increase the tendency to scar formation. The general surgeon uses as few stitches as

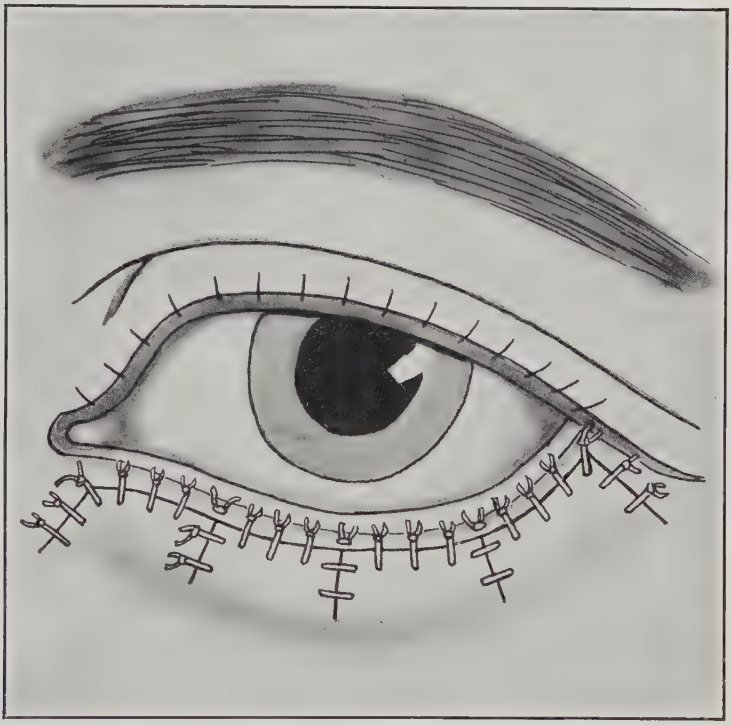

Fig. 16.—Small wedge excisions may be closed by a single stitch, larger areas may require two stitches. The scar line along the lashes is effectually shaded. Properly sutured short lines below the eye show very little.

is possible, passing the needles through masses of tissue and drawing the suture tightly. All such practices are taboo in featural surgery. Interrupted

sutures carefully placed so that no possible gaping can occur between stitches secure perfect approximation with the least stitch tension. This minimizes

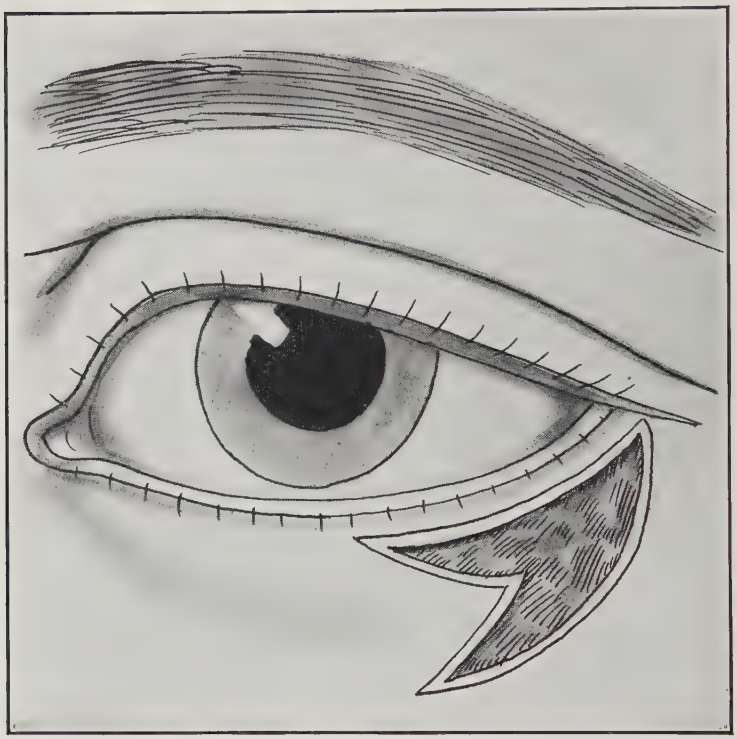

Fig. 17.—A sliding flap operation sometimes more effectually overcomes fullness, particularly in those cases where the condition is localized externally or internally.

the tendency to formation of stitch marks. Tightly tied stitches may mark the skin even if removed in forty-eight hours. Carefully placed stitches properly tied may be left in three days without causing

stitch marks. This is long enough to allow union to occur. Some surgeons in face operations recommend removal of stitches in forty-eight hours. It is

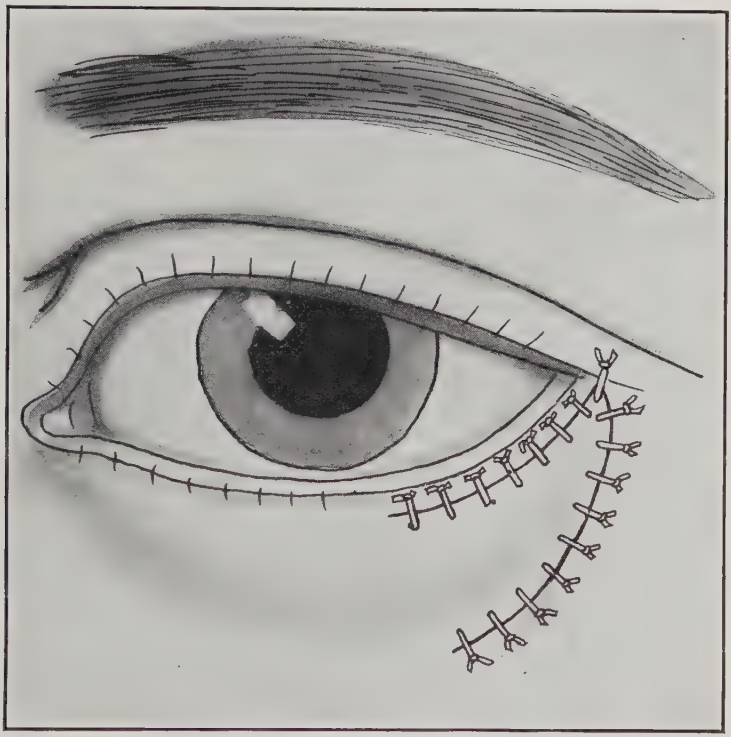

Fig. 18.—Illustrating manner of closing below the external angle of the eye.

possible to get sufficient union in this time so that stitches may be safely removed, but the surgeon who uses correct judgment in stitch placement and stitch tension will have little to worry about his stitches.

To avoid eversion of the lid excisions may be required along the lower edge of the wound. In some cases a single wedge may be taken from the inner

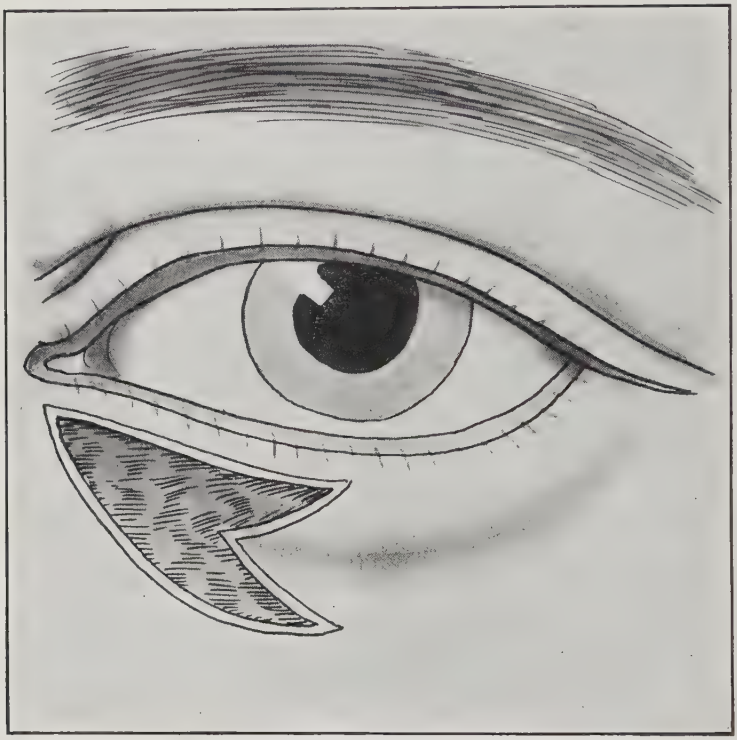

Fig. 19.—Operation below the inner canthus. The tissues are drawn upward and inward.

angle of the eye. In other cases the resultant line of union will appear to best advantage if made to extend obliquely outward and downward from the outer angle. This line may best correspond to the features

and effect the required shortening. When it is desirable to avoid a line of any length short wedges of skin may be cut out at different points along the

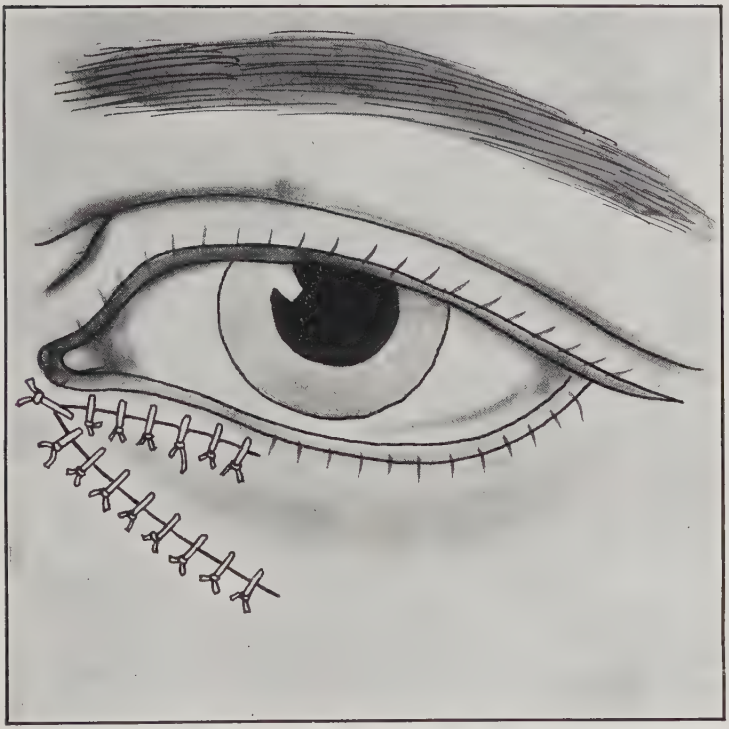

Fig. 20.—Manner of closing. One scar line is shaded by the lashes, the other corresponds to a natural line at this point.

lower margin of the wound. When closed these are so short that they may not be noticed, when a longer line at one point might show more decidedly. When the operation is completed there should be no

eversion. Years ago when the operations were first performed along the free margins of the lower lid and eversion occurred, surgeons would tell the patients

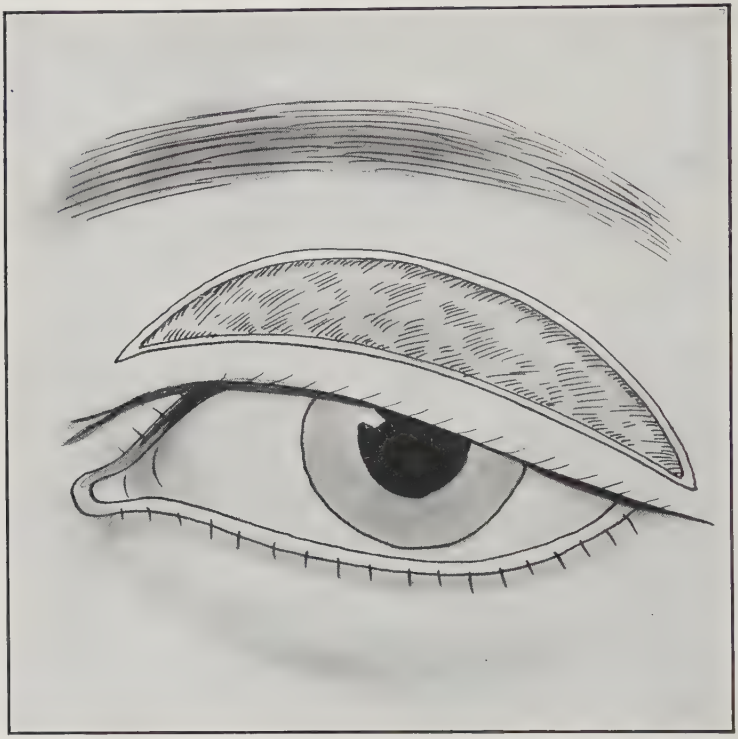

Fig. 21.—Illustrating manner of excising fold above the eye. The operator here chooses to place the line of union at the base of the lid. The scar line is hidden when the eye is open.

that the eversion would disappear in a short time. Sometimes this occurred and sometimes it did not. Fortunately these cases were remedied without much

trouble when they fell into the hands of other surgeons who understood the principles of plastic surgery.

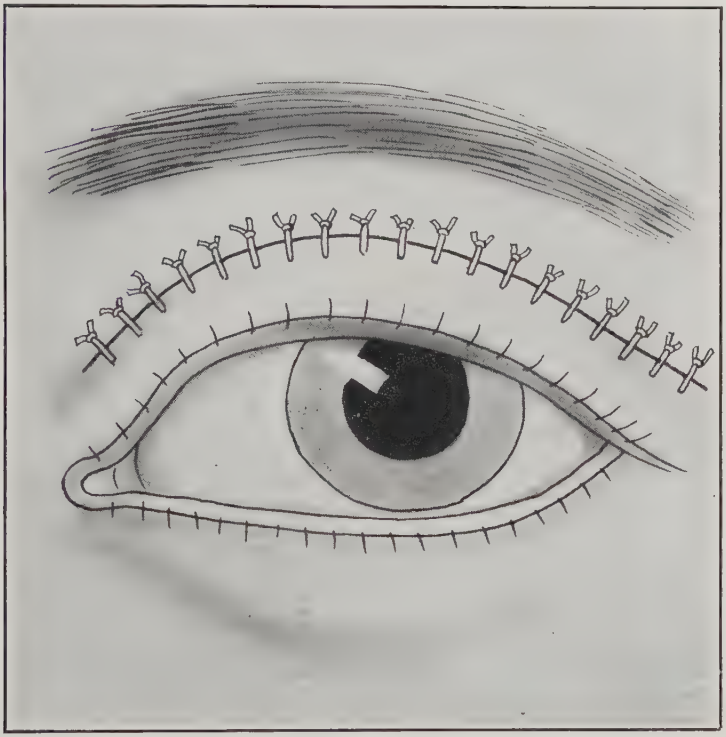

Fig. 22.—When crescent of tissue has been removed skin interval is closed so that line of union is about midway between the free margin of the upper lid and the eyebrow.

Some lines and folds are conspicuous at either the inner or outer canthus. In such cases the crescent removed along the length of the lid may not be required. An ellipse may be removed along the border

of the lid for only part of the length of the lid. If such operation is effective a short line close under the inner or outer angle of the lid may be all the line of

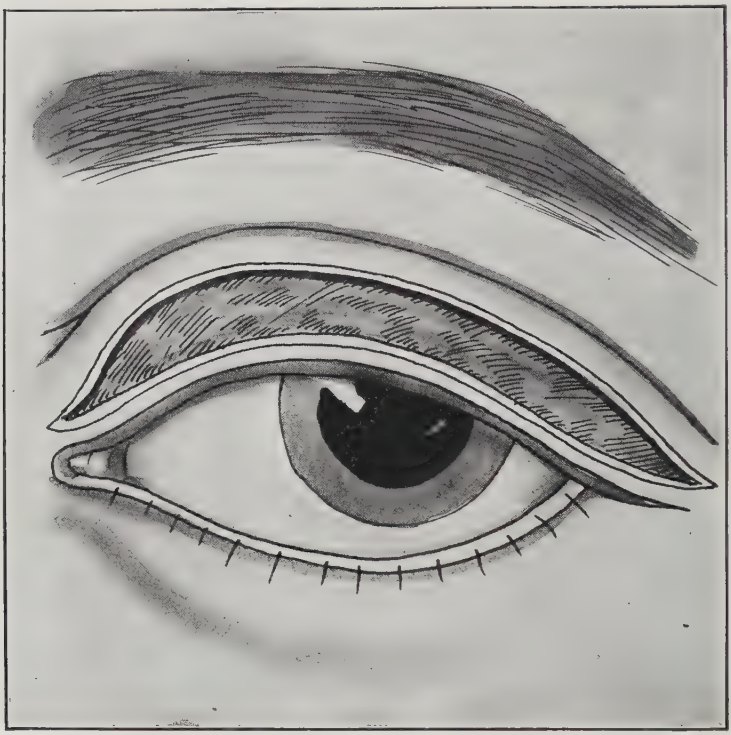

Fig. 23.—Certain cases may be operated upon to better advantage by removing skin from the upper lid forming a line of union close to the free margin of the lid.

union that the surgeon need make. In other cases it may be necessary to extend the lines of excision so that one line runs close to the lid margin and the other angles away, forming a letter V. Such excis-

ion will allow the drawing of the skin upward and inward or upward and outward as the case may be. The same care as to excision must be practiced as

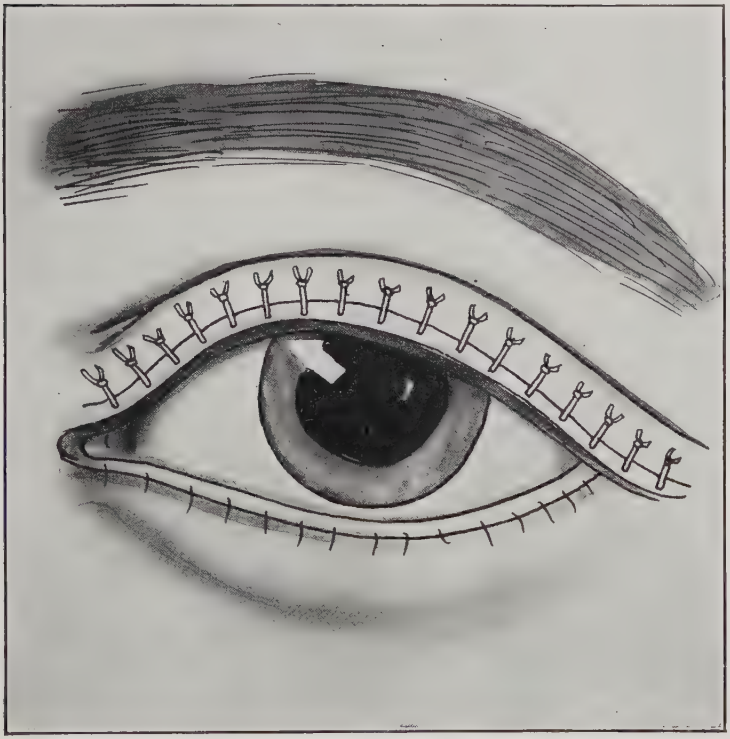

Fig. 24.—Skin interval closed by closely applied interrupted sutures of fine non-absorbable material. Aseptic unions result in scar lines which pass unnoticed.

has been described in the operation of excising a crescent below the lid. The technic to control bleeding is adaptable to this type of operation. In fact, this method of having the assistant follow the sur-

geon with a compression pad is the standby of the plastic surgeon who takes more or less pride in doing nearly bloodless operations.

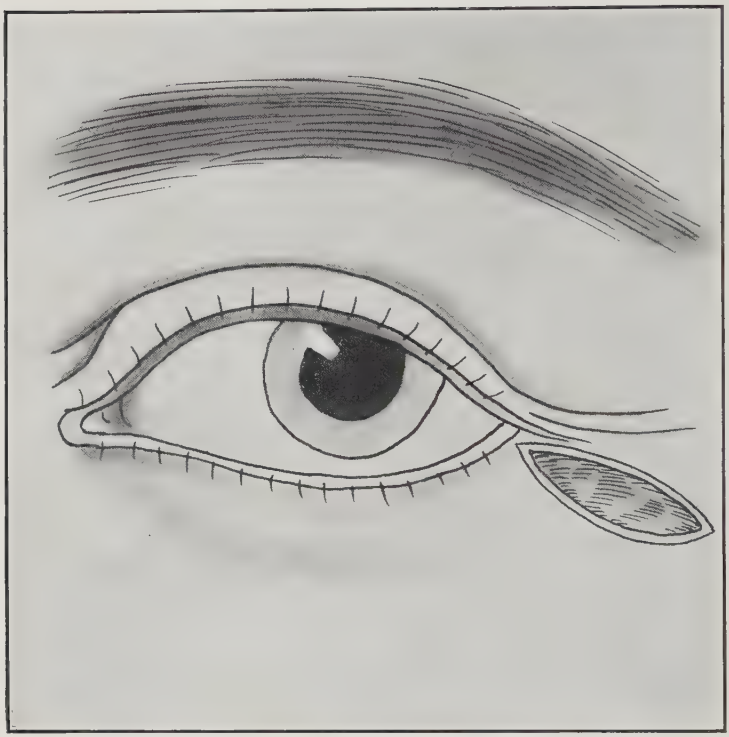

Fig. 25.—Excision of lozenge shaped skin segment for undue fullness of tissues and lines at this point.

It is well worth while to conserve the blood of the patient. While the amount lost might not be important from the standpoint of the health of the patient, even if particular efforts were not made to prevent such loss, the effect on the patient of such

conservation is very good. It robs them of much of the nervousness that naturally is felt while undergoing operation. We cannot be too careful not to

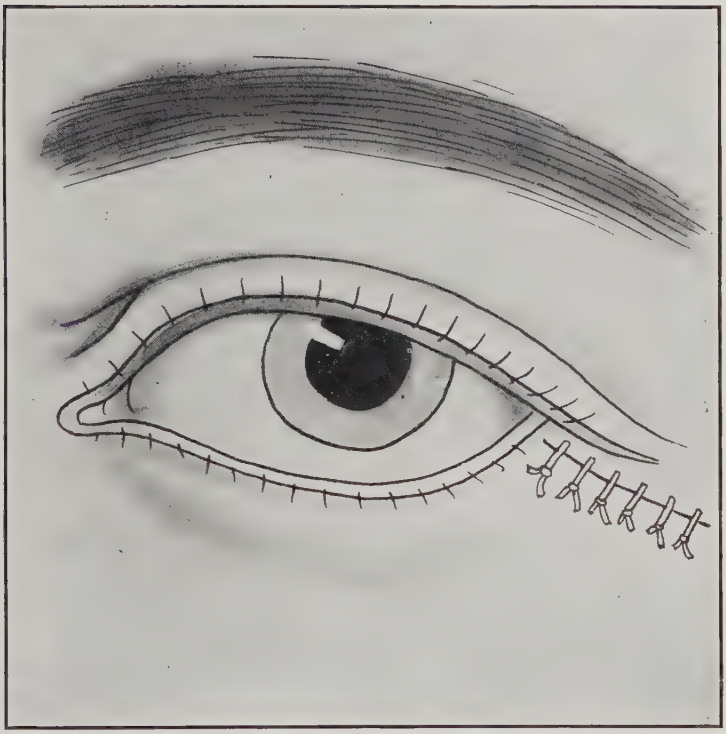

Fig. 26.—Skin interval closed. The line of union should be made to correspond to the natural lines of this region. Care should be taken not to remove sufficient skin to cause pronounced tension as scar lines are likely to show plainly when parts are brought together under too much tension.

jangle the nerves of our patients. Nine-tenths of the women who submit to these operations are high-strung, modern types who suffer enough from nerves.

Operation is dreaded by them but they are so anxious to secure the effects of operation that they submit even though the surgery is likely to be a severe test for them.

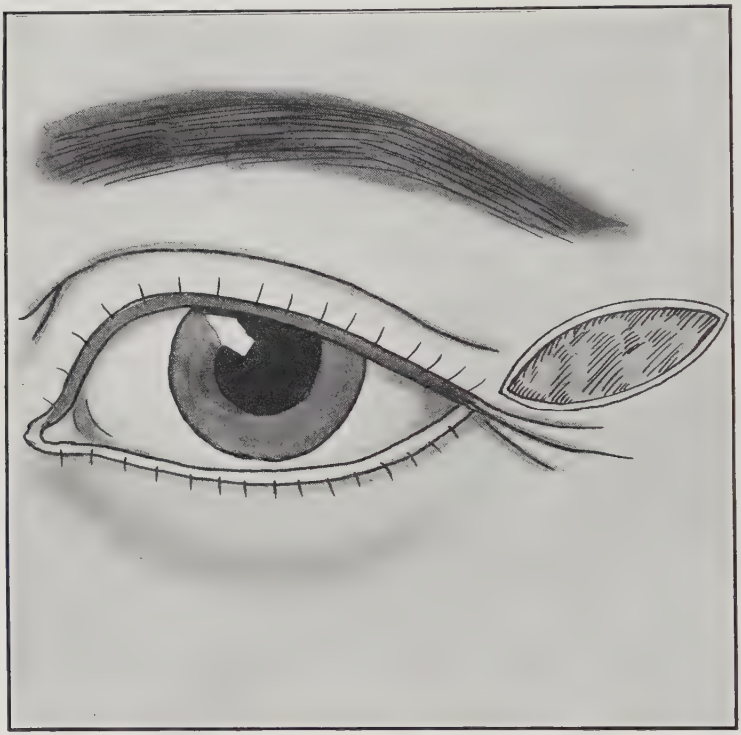

Fig. 27.—Removal of segment extending upward and outward.

To avoid these ill-effects too much surgical display should be avoided by the surgeon. The room where the operation is to be performed need not be elaborately equipped. A few simple instruments only are

used in operation. These may be placed between two towels on a small table. One assistant only is needed by the surgeon. Several people bustling about get-

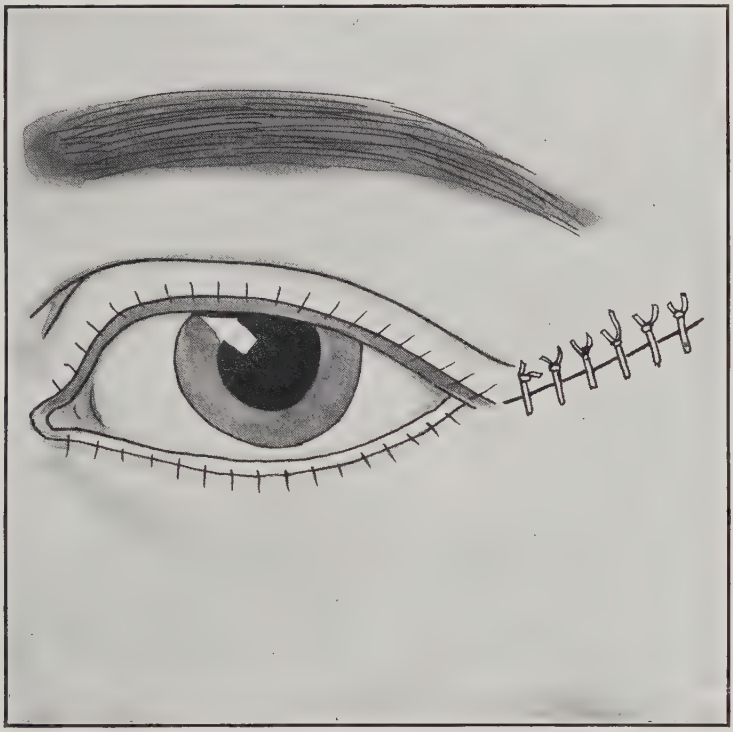

Fig. 28.—Union of skin, placing line so as to correspond as nearly as possible to natural line.

ting in each other's way is only a nuisance anyhow. When the operation is painless and bloodless and the patient is alone with two calm, unhurried people there is nothing to terrify and add a psychic trauma to tense nerves.

Skin toilet should be very painstakingly made before operation. Every precaution should be taken during operation to maintain absolute asepsis. Dress-

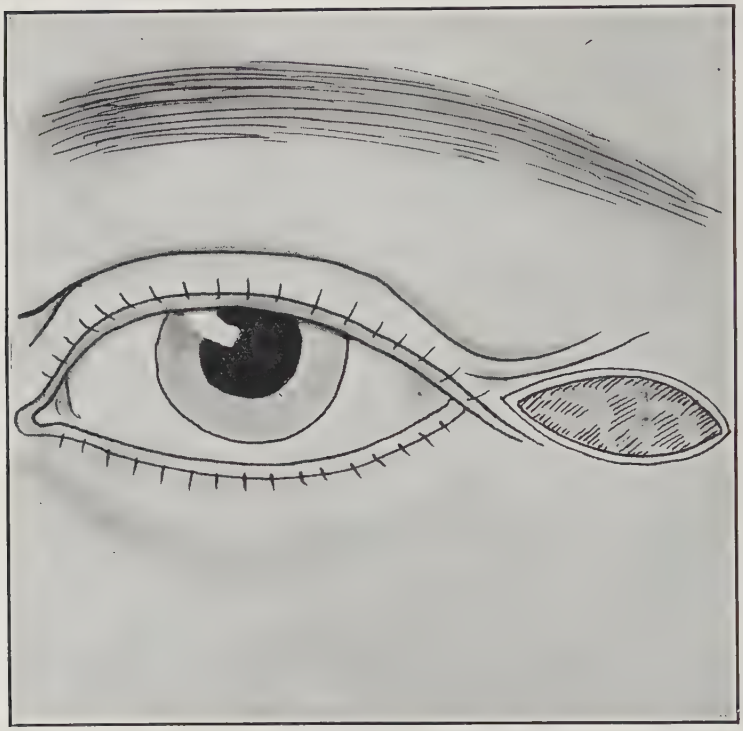

Fig. 29.—Transverse excision.

ings should be lightly sealed so as to protect the skin edges from outside contamination, and at the same time care should be taken in their application so that removal will be possible without disturbing the sutured edges. Sutures may be removed in two days

but as a rule it will be safer to wait somewhat longer, and if the precautions advised have been taken in closing the wounds no harm will occur when the

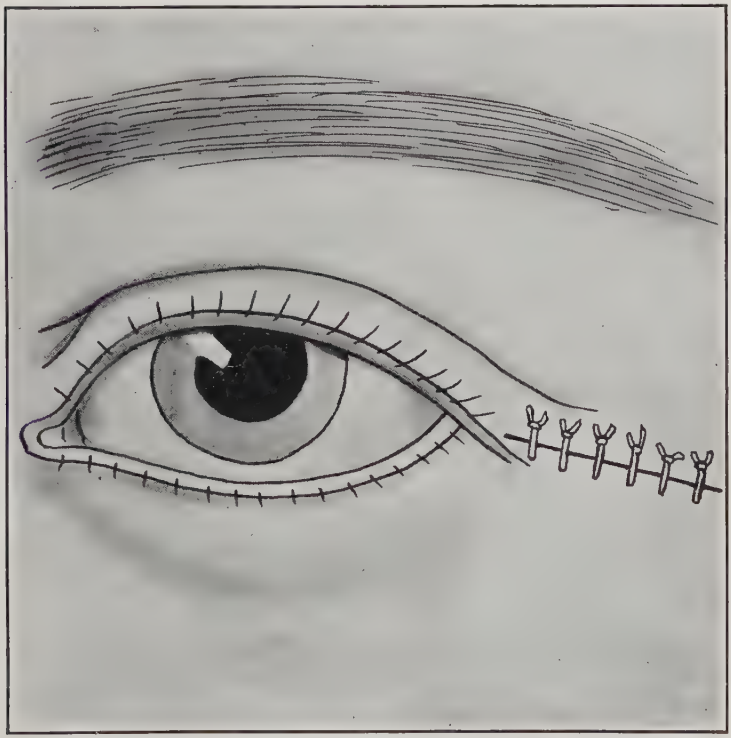

Fig. 30.—Closure parallelling the natural lines of this region.

stitches are left in three days. Stitch marks are sure to follow too tight drawing of the stitches no matter how early they are removed.

A seal of collodion, which is hard to remove, may endanger the slight union which occurs in the first

few days. To avoid this a firm supporting dressing may be formed below the eye. Collodion is painted below until a thick false skin is formed. This should not come up on the lid. This may then be covered

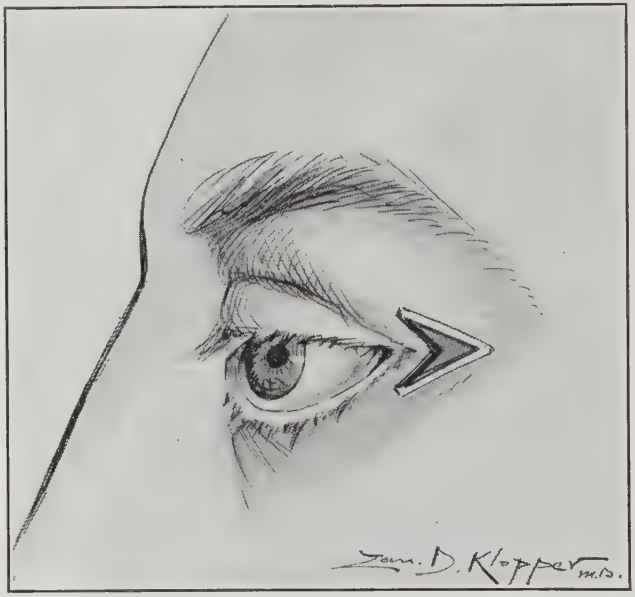

Fig. 31.—Excision well away from the eye may be necessary in a few cases.

with a single strip of gauze saturated in collodion. This dressing below immobilizes the soft parts. The dressing of the wound itself may be lightly fastened to this. Such dressing may be made from a wisp of cotton painted over with a thin layer of collodion. When the surgeon wishes to inspect the wound a little ether will soften the light painting of collodion

over the cotton and allow its removal without disturbance to the tissues which have been incised. The heavy collodion below the eye should be left on for at least a week.

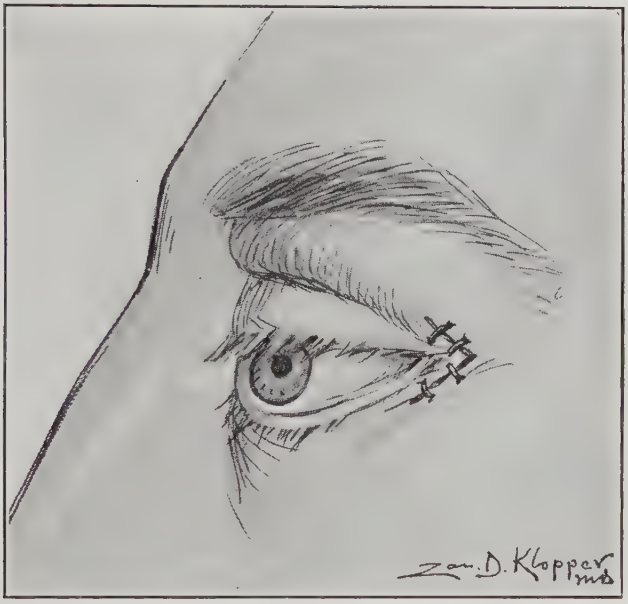

Fig. 32.—Union forming lines well away from lid margin.

Removal of Skin at the External Canthus.—Sometimes operation below the eye will relieve fullness and wrinkling at the external canthus; in other cases it may be necessary to excise a lozenge of tissue from this neighborhood, making the line of union parallel the palpebral interval or angling downward from the outer canthus. These small lozenges of tissue may

be excised and the tissues brought together so that a straight line of union is formed. The same extreme care must be taken as in all these operations so that the scar line will be insignificant.

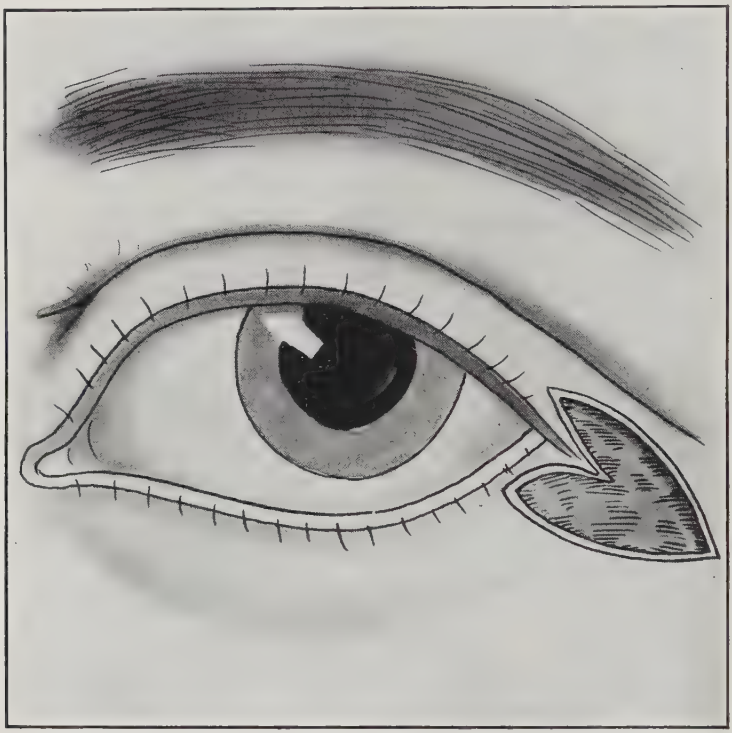

Fig. 33.—Excision above and below canthus forming lines of union close to the lid margins.

In some cases removal of skin at the canthus can best be effected by staying close to the skin margin of the lid, removing some from below the canthus and some from above. In this operation the V-

shaped excision closely follows the lids, and the line of union is placed as close to the lid margins as is possible.

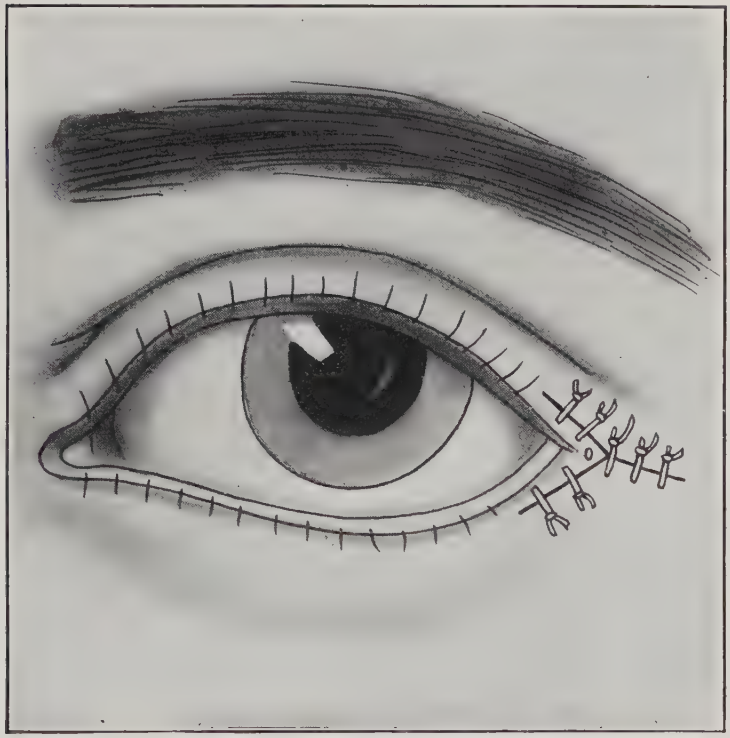

Fig. 34.—Manner of closing with closely placed interrupted sutures.

Removal of Skin From Above the Eye.—Operations above the eye call for less modification to meet individual conditions than do those below. The classical operations are more often useful here.

Two general types of excision are applicable above the eye. The first of these consists in closely following the lid margin below the eye, as recommended. The second type of operation is the excision of a

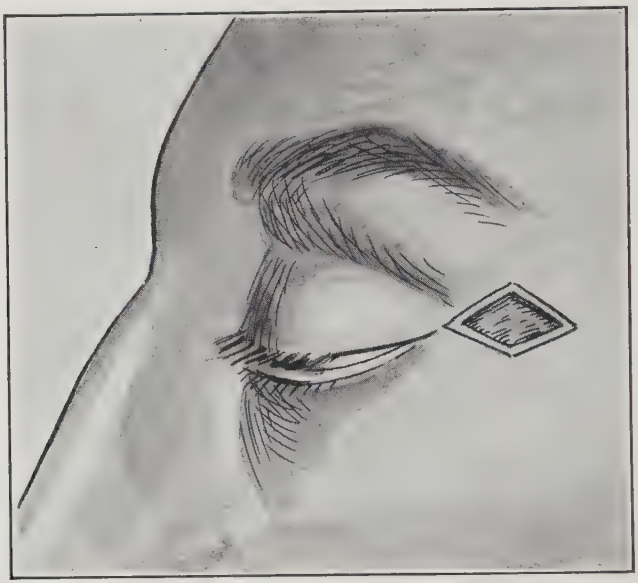

Fig. 35.—Diamond shaped excision.

segment midway between the lid margin and the eyebrow. This operation tends to form the scar in the interval between lid margin and brow so that it will not show when the eye is open. This is perhaps the operation of choice in most cases.

Sometimes the fold to be excised should include tissues somewhat beyond the outer canthus and the

inner end of the incision need not be carried inward as far as the inner canthus. Tendency to eversion is much less than below the eye so that when a crescent is removed along the lid margin this crescent

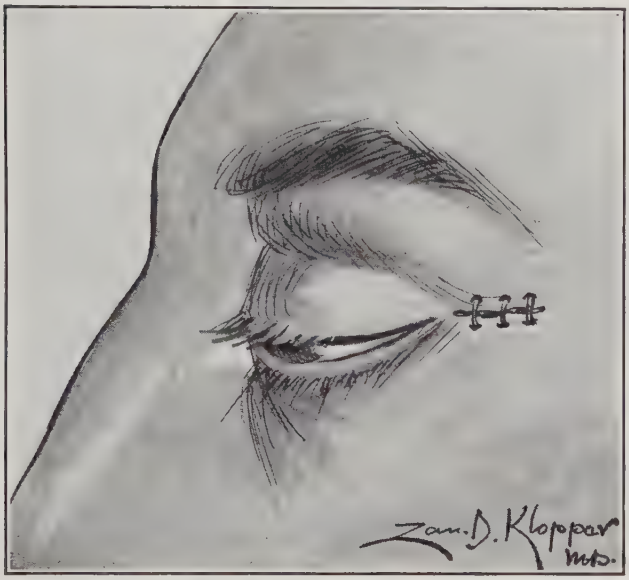

Fig. 36.—Illustrating method of closing diamond shaped excision. The line of closure can be varied to correspond to natural lines.

need not be modified by excision of segments to prevent eversion. When excision is made midway between brow and free lid margin there is no tendency to eversion.

The same measures to prevent bleeding and the same care in technic should be exercised here as in

other operations. Interrupted sutures should be placed close together. The protective dressings should be so applied that they may be removed without loosening the wound edges.

When the surgeon has dealt with these conditions for many years the actual operation in his hands becomes very easy, and in each case he knows just about what he should do to get a satisfactory result. Those operators who have had but limited experience in plastic surgery of this kind should make haste slowly in doing these operations, but if due care is taken and the surgeon is acquainted with the various methods described good results should be uniformly attained.

CHAPTER VI.

FACE LIFTING OPERATIONS.

There are two ways of performing face lifting operations, one way easy, rapid, accurate, nearly bloodless; the other way blundering, awkward, bloody. I believe the surgeon who reads the following descriptions will get a clear conception of the writer's technic, and should he care to practice these operations find the suggestions useful.

Several effects are secured by face lifting operations. In excisions above the forehead the effect is purely a lifting one, but in the more common excisions in the temporal region a retracting laterally is secured as well as the lifting effect. This is advantageous for the lateral pull may do more to restore youthful contour to the face than the lift.

Face lifting operations do not, of course, effect the complexion, but it is surprising how much they do to restore the contour of youth. The surgeon should keep this always in mind in his studies of the effect of the various excisions. In testing before operation the surgeon can with his hand draw the tissue upward and backward in the direction he expects to draw them when his excisions have been made, he

should note carefully the effects of these tests not only upon the hanging cheeks but upon the tissues about the eyes and the naso-labial lines. All these parts are effected by the lifting operation, and the surgeon should observe these various points so that he will not draw back too much in the region of the eyes and perhaps not lift enough below.

All face lifting operations are, if possible, made within the hair line. By so doing the lines of union are hidden by hair and the surgeon has the added advantage of the tough scalp layers to hold his sutures.

The arrangement of the tissues of the scalp are peculiar to this region. In no other part of the body are skin and subcutaneous tissues so arranged. The skin itself is tough and dense, the underlying connective tissues well developed and with the fibrous and muscular layers beneath are intimately connected. This union of three layers makes from a surgical standpoint a single dense resistant layer which is freely movable over the fourth layer. The scalp can be pinched up into a fold, and cut through accurately. Thus depth of incision is easily determined. Vascularity is such that the parts lend themselves to plastic operations. Density of the scalp allows of a degree of tension not possible on other parts of the face. Sutures reinforced by tension buttons or plates may be drawn tightly, closing considerable gaps. After operation the slight tendency

to sag which is natural to tissues of the face is so slow that the effects of the operations are seen for years.

The Forehead Lift.

This operation is performed for overcoming wrinkles in the forehead, and for lifting the eyebrows slightly. Effects lower than this are not to be expected.

The first step in the preparation of the patient is to shave enough hair to allow a good aseptic preparation of the field. These suprafrontal operations should always be practiced above the hair line, as any results possible with these operations may be attained by staying high up where scars will be hidden by hair.

In operations on the side, in the temporal region, it is sometimes necessary to extend incisions below the hair line in front of the ear, and in some cases in women to come out on the face in the temporal region, but in this forehead lifting operation all the effect which may be attained by the operation is possible by staying above the hair line.

All lifting operations should be performed after infiltration of the tissues with very dilute cocain or novocain solutions. These solutions made up in normal salt solution are injected in sufficient quantity to blanch the skin. When so distended a one-fourth

of one per cent. solution will completely deaden parts infiltrated.

The scalp is cut through as a single layer. A convenient way for the beginner is to pinch up a fold and divide the fold. In making the single median incision a slightly curved incision should be made. When the skin is first cut a sharp free bleeding occurs, but the quick application of snap forceps to bleeding points will prevent much loss of blood. Snap forceps left on for a few moments control nearly all bleeding points. Those which insist on bleeding after removal of the forceps may be re-snapped and twisted.

When an incision has been made about the length the surgeon proposes to make, the skin may be drawn upward by hooks to determine just how much should be removed. Careful testing will allow the operator to estimate accurately the amount of skin which should be excised. This may then be cut away either with scalpel or scissors.

All hemorrhage should be controlled before the sutures are tied. It is true that, as a general surgical practice, sutures are effective means of controlling bleeding but in these operations it is really better surgery to have bleeding controlled before suturing, as blood effused under the scalp becomes infected readily and the surgeon invites this when he depends on the sutures to control bleeding.

Heavy braided silk is the best suture material, and except in cases where very little tissue has been removed, tension buttons should be used. Tension buttons may be either ordinary flat buttons which will stand boiling with the instruments, or special buttons cut from sheet lead. Tension plates are made from sheet lead. They are merely strips of this material perforated at short intervals to allow passage of sutures. Such plates can be moulded to conform accurately to the cranium. Plates or buttons allow sutures to be placed under decided tension so that the skin may be held together and union occur, when without their use stitches would cut to such an extent as to allow the wound to gap.

Scars are readily hidden in the hair. This is true even in men, so that in these operations the surgeon is not as fearful of scarring as upon exposed areas.

Rigorous antiseptic precautions, before, during and after operation are necessary. Infections in the scalp tissues spread in the loose areolar spaces and may involve a wide area. The surgeon should make up his mind that no precautions are too irksome to prevent infection. It is true that resistance of scalp and face tissues to infection is usually pronounced, but the operator should never presume upon this and allow himself to be careless.

Sutures may be mattressed or the interrupted stitch may be used entirely. The continuous stitch

should not be used as one stitch bite giving way relaxes all the stitches.

Stitches should not be removed early. In operations upon the face the very early removal of stitches is urged, but here time must be allowed for rather firm union. No stitches should be removed in less than five days, part or all of them may even be left for a week. If properly protected infection will not develop and stitches do no harm if infection is avoided. The double excision sometimes gives better results than the single incision in the median line. In this operation an incision is made above each frontal eminence, the desired amount of skin excised to draw up the parts, and the operation completed as described.

The single excision across the median line is intended to remove the small group of lines which sometimes form across the forehead below the line of the excision. For relieving such condition the median excision will usually prove satisfactory in all respects, but when frown lines have formed and are found in conjunction with the transverse lines the double excision on each side of the median line will be more effective. This operation may also prove adequate for the removal of frown lines alone if the lines of excision are so formed as to draw upward and rather decidedly to each side. This may necessitate placing the excisions quite far over to-

ward the temporal region. No hesitation need be felt in doing these operations if the surgeon, from the point he expects to excise, can by traction draw out the wrinkles or frown lines. The amount of slack which can be taken out of any part of the face by these operations for excision of loose tissues is really more than the uninitiated suspects.

In excising from each side of the median line, after the tissues have been rendered insensitive, the surgeon may hook into the skin and firmly draw it to one side. By so doing he can see in what direction tension must be developed. The extent and direction of the excision having been determined, the scalp is cut through, and as the operator divides the tissues an assistant may follow the knife with a pad of gauze, controlling bleeding by compression. In this way a segment of the scalp may be excised quickly; as fast as bleeding points are formed the assistant pressing forward with his pad controls bleeding. The surgeon may then turn to the opposite side and while compression is continued upon the area excised, following a similar technic the second area is excised.

By this technic both areas are cut out before any effort is made to control bleeding, except the compression which has been practiced by the assistant. Such compression will entirely control hemorrhage if it is properly applied. A clever assist-

ant can follow the scalpel closely so that very little blood is lost.

Turning to the first excised area, the gauze compress is lifted at the corner where the operation started, and as it is rolled back exposing the raw surface any bleeding point may be snapped. The surgeon then exposes the second excised area, snapping any bleeding points.

All bleeding is now under control, and the wound exposed. The area on the opposite is then exposed. The operator then removes the first snap forceps applied. Should the point bleed it may be resnapped and twisted. Each hemostat is now removed in turn. Some will have controlled bleeding, a few may require resnapping and twisting.

Excision was made rapidly, hemostasis effected quickly, all without haste. The surgeon now can prepare to close his wounds and, if his judgment was good and the correct amount excised, the operation is over in a few minutes with very little loss of blood.

Following the knife with a compression pad is a mere surgical trick but it is very effective in the vascular face and scalp tissues with which the featural surgeon deals. It is a practice that enables one to perform an operation with a celerity which actually startles the uninitiated. The moment the tissues are incised they are compressed. The first

flush of blood which would suffuse the operative field is prevented. The small vessels severed have time to close, and when pads pressed over the wounds are tipped up gradually the operator without difficulty spots bleeding points which need snap forceps. By this technic and by going from one side of the face to the other and then returning the surgeon saves blood and time. Patients when told to expect extensive excisions, as are necessary in some featural operations, feel sure that much blood must be lost during operation. It is a pleasant and mystifying surprise to find that the surgeon can not only do the operation painlessly but at the same time quickly and bloodlessly.

The Side Lift.

Several conditions are overcome or ameliorated by the various side lifting operations, and the surgeon will vary these operations to meet the indications of each individual case.

Some patients have pronounced wrinkling about the eyes which may best be overcome by the operation in the temporal region. Other patients have the typical sagging cheeks and the operation must be a more direct lift, while not a few have pronounced nasolabial lines in conjunction with these other conditions. Collectively, changes such as have been enumerated give to a woman an appearance of

age which she is most anxious to overcome. Her skin may be good, she may in all other ways belie her years, but the characteristics which rob her of her

Fig. 37.—Median excision above hair line. Manner of excising for lifting tissues in median line.

youthful contour must be overcome if the impression of age is to be avoided. The lifting operations overcome these characteristics as nothing else will and operations successfully performed result in actual transformations.

The operation most often indicated calls for the excision of a segment of skin extending obliquely upward and forward from just above the anterior

Fig. 38.—Manner of closing using tension buttons. Heavy braided silk is usually the best material for closing these skin intervals.

margin of the ear. This excision, varied more or less in width as the individual case may call for, serves in most cases to secure the desired result. When a greater lifting effect is required the excision may be

triangular. Triangular excisions may be closed in several ways to vary the lifting and retracting effects, or in certain cases a quadrangle of tissue may be

Fig. 39.—Excisions over frontal eminences for purpose of lifting tissues below.

excised and the tissues below loosened and slid into the interval. The surgeon acquainted with the usual practices of plastic surgery may adopt any of the methods so used to accomplish his purpose.

The most radical of lifting operations includes the excision of tissues from in front of the ear. In such operations the surgeon abandons the cover of the

Fig. 40.—Manner of closing.

hair, and he will leave a mark, he should not lead his patient to believe he will not. As the line of union will be under tension, the scar left by a lifting operation is likely to be more distinct than the union which occurs when there is practically no ten-

sion on wound edges. It is up to the surgeon to make plain to his patient just what to expect, it is not humane to take the woman who is unsuspicious of

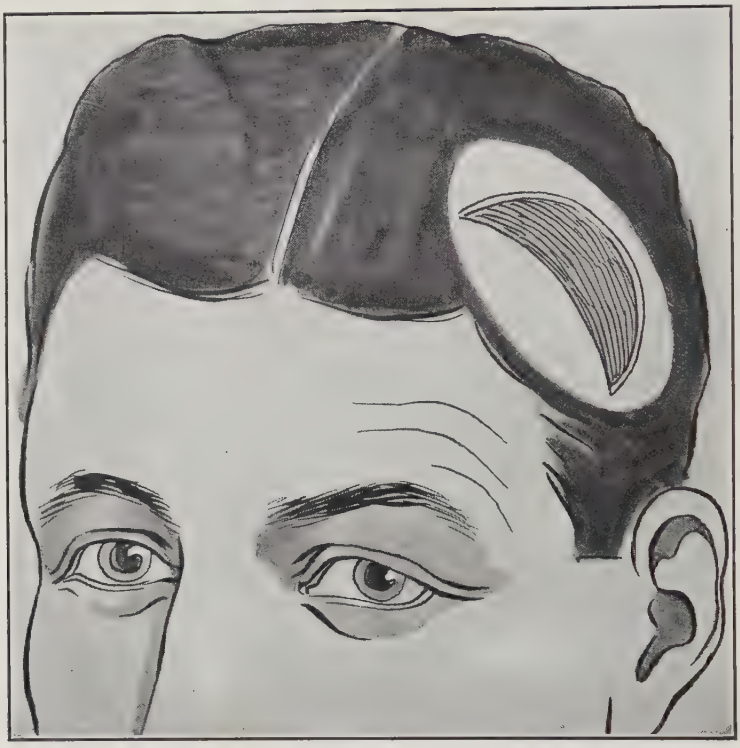

Fig. 41.—When tissues are excised over frontal eminences traction may be made upward and outward. One of the effective methods of overcoming scowl lines.

such result and operate upon her. She should choose, she should know that she will have a scar line which can be hidden only by cosmetics and they must be

used rather heavily as a rule, or she must be prepared to dress the hair so as to hide the line.

If a woman needs to lose these tell-tale signs of

Fig. 42.—Manner of closing to overcome forehead lines and scowl.

age which sagging features give, if she has a calling in which lost youth is a detriment, she may gladly choose to cover the signs of the surgeon's knife, and be well content in so doing, but every woman should

have this squarely put to her before operation, if the surgeon proposes to excise from any part of the exposed skin of the face.

Fig. 43.—Direct upward lift. The illustrator has placed the excision too far back. The excision should be as far forward as the hair line will permit.

The lifting operation which extends the excision down in front of the ear requires a somewhat irregular excision as a rule, the surgeon should not feel that he need follow the lines particularly de-

picted in the illustrations of this article. The idea of all these operations is to lift and draw back the tissues without distorting, particularly, the region about

Fig. 44.—The operator should not fail to note effect of lift upon the external canthus. Too much lift at the external canthus may cause an effect which will be a shock to both surgeon and patient.

the eyes. If the operator has this in mind and observes that he does not too greatly distort this region about the eyes, he can excise to meet the needs of each patient.

In all these operations the three layers comprising the scalp are cut through, the same conditions as to

Fig. 45.—Type of excision frequently adopted in face lifting operation. Backward and upward drawing of tissues usually needed.

vascularity are met here as in the operations above the forehead. Bleeding should be controlled before sutures are applied. Tension should be relieved by buttons or plates. The suture material of choice is

braided silk. It should be coarse enough not to cut readily through the tissues.

Fig. 46.—Manner of closing with tension buttons. The entire thickness of the scalp should be excised down to the loose subaponeurotic areolar tissues.

As little excision as possible should be practiced below the hair line. Free excision above the hair line should always be given preference to excisions on any part of the skin uncovered by hair. When

excisions must be made on parts of the face not covered by hair, as little as possible should be removed from such region and as much as possible from above

Fig. 47.—Type of excision where more lift than lateral drawing back is needed.

the hair line. Sometimes excision below the hair line may be avoided by adding to the temporal operation an excision from behind the lobule of the ear.

In this last type of excision a drawing back and lifting effect may be secured. The principles guiding

are the same as in other plastic operations. Tissues are excised to meet, as best one can, the individual needs. Closure should be in such manner as to

Fig. 48.—Manner of closing triangular excision.

secure the greatest amount of drawing back and lifting of the parts below and in front of the ear.

The operation behind the ear may be used particularly in conjunction with the lifting operations in the temporal region. Alone, this operation of excision

from behind the ear seldom attains as much as the patient desires.

No operation for taking out slack from the face

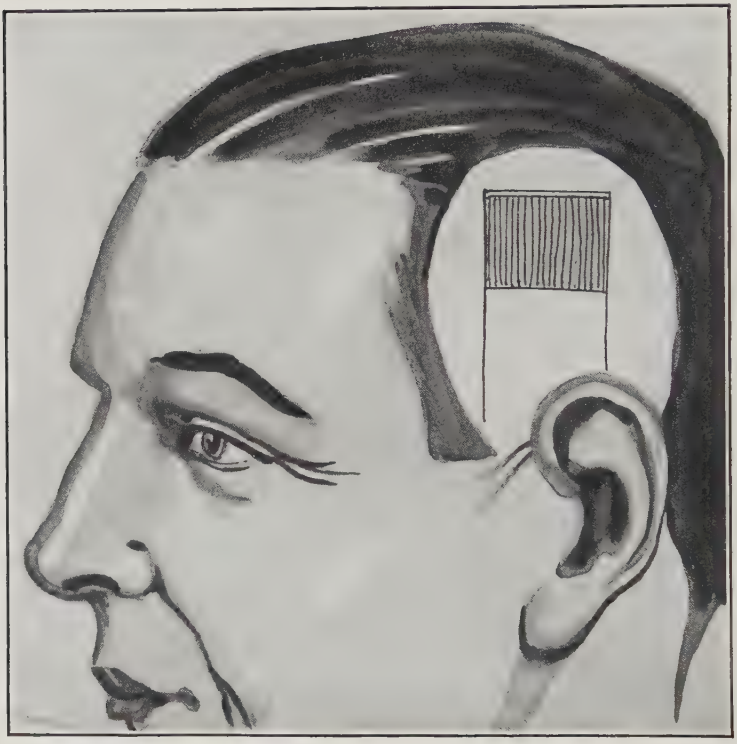

Fig. 49.—Flap sliding lift. A direct lift without drawing back the tissues from median line. The illustrator has drawn the excised area somewhat farther back than is indicated.

should be begun before a careful survey has been made by the operator. He should study the face so as to determine just what has happened to destroy the youthful contour, for it is to restore this that the

operations are performed. When women have put off operation until sagging is universal the surgeon may need the cranial excisions above, the temporal ex-

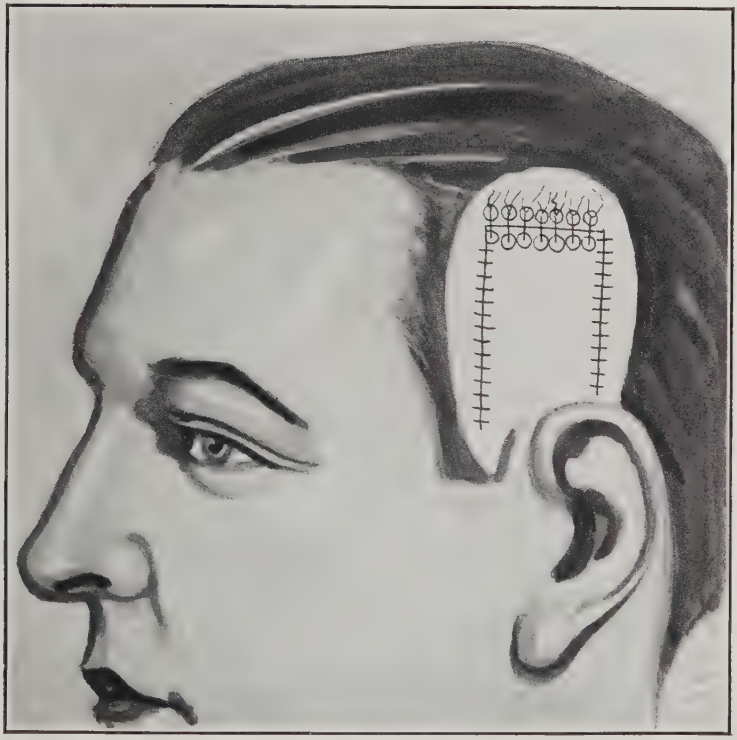

Fig. 50.—Illustrating closure of rectangular excision. This is the adaptation of an old method of plastic surgery to the face lift.

cisions and the excision in front of and behind the ear. All such excisions are practicable on the same patient. It may not be policy for the inexpert surgeon to attempt them all at the same sitting, though

if the method I have described in the previous pages is followed and the surgeon is sufficiently expert to adopt such technic, all such excisions are possible at one sitting.

Fig. 51.—Modification of the rectangular excision to get backward as well as upward pull.

In viewing his patient the surgeon may note forehead lines and frown lines. These call for high temporal or even suprafrontal excisions. Lines about the eyes demand retractive excisions in the

temporal region. Some lines about the eyes are best overcome by excisions close to the margins of the lids. Such excisions carefully made leave traces

Fig. 52.—Manner of closing.

which are easily hidden and they lessen excisions in the temporal region.

Too much backward and upward traction about the angles of the eye may affect this region in a way not desired. The surgeon must watch carefully not

to distort this area. One will hear now and then of a plastic surgeon operating and producing a fixed smile. Such an effect is unlikely. It would require

Fig. 53.—Face lift carrying excision down in front of ear. If any amount of tissue is removed from the region in front of ear and parts are brought together under tension distinct scar line is likely to result. The conscientious surgeon will advise his patient to this effect.

a degree of tension which no surgeon is likely to make inadvertently, but the excess tension about the eye angles is much more readily produced and should

be guarded against. Careful testing, caution in excision is the best protection for the inexperienced surgeon. He should not attempt too much at one

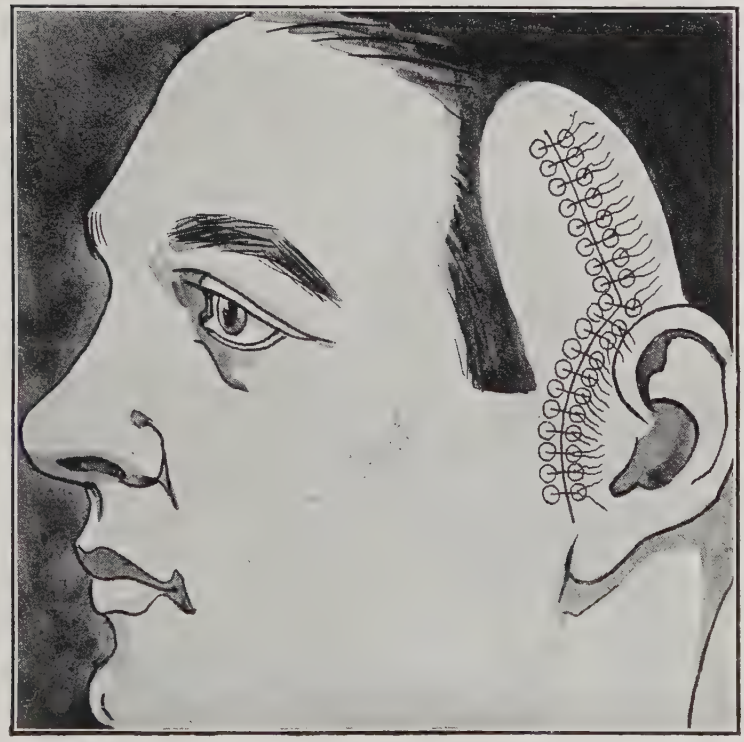

Fig. 54.—Manner of closing. Tension buttons are used if much tissue is removed. This operation secures the most decided effect of the face lifting excisions.

time. Step by step he can cover the face when conditions demand these several operations. As his experience grows he can group his operations, perhaps doing all at one sitting.

The straight lift of sagging cheeks when accomplished by excisions low down in front of the ear are unlikely to present any particular difficulties to

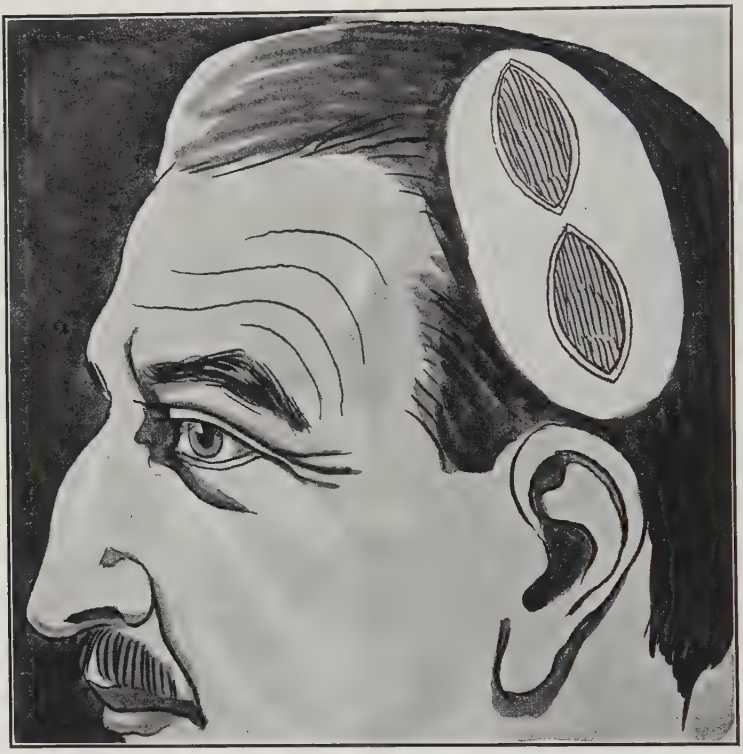

Fig. 55.—Sometimes excisions are made far back over the ears as adjuncts to excisions in the temporal region.

the surgeon and the likelihood of distortion is remote.

Usually patients who have the sag below the masseters have also nasolabial lines which may be overcome by effective retraction. A backward and up-

ward lift from about the level of the top attachment of the ear best eradicates these lines. When pronounced muscular contraction of the muscles of this

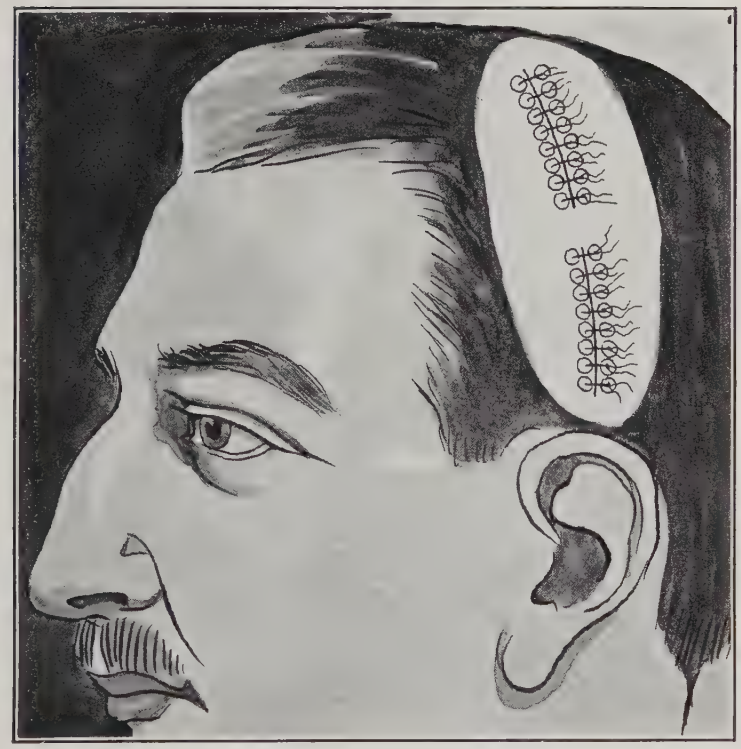

Fig. 56.—Manner of closing.

region has exaggerated these lines peculiarly, as is sometimes seen, subcutaneous section of the muscles may be used as an adjunct.

The surgeon should not hope to overcome baggy folds beneath the eyes by temporal lifts or excisions

from the region in front of the ears. These conditions are overcome by the methods described in the chapter on this subject. Such operations are very ef-

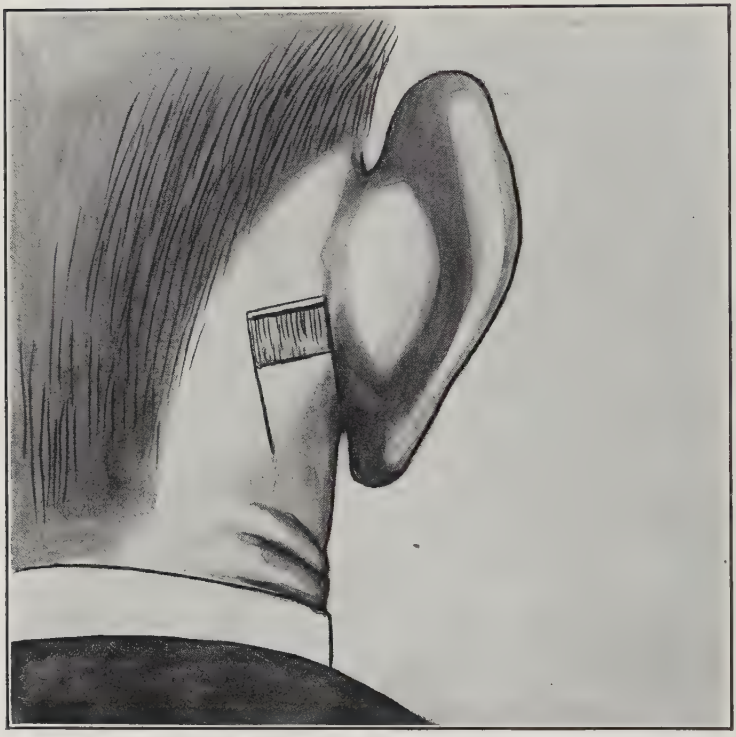

Fig. 57.—Behind the ear lift. This may enable the surgeon to get sufficient lifting effect when used in conjunction with the lift in the temporal region.

fective, those in which the surgeon places his scar-lines in the shadows of the lashes leave practically no trace. They are satisfactory and produce such excellent results when correctly performed that the

featural surgeon will usually be glad to utilize them for correcting the bagginess beneath the eyes.

Temporal excision should be carefully planned.

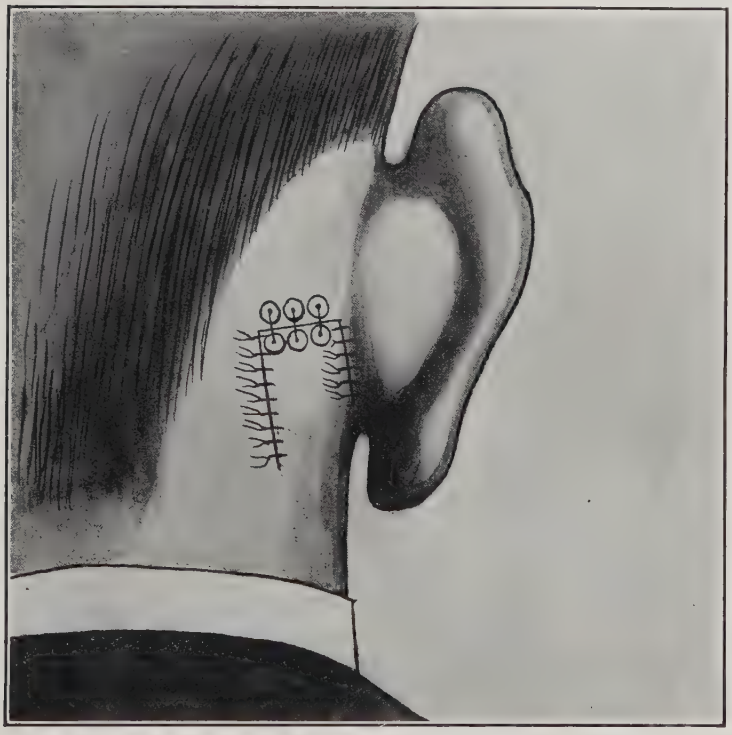

Fig. 58.—One method of closing behind the ear excision, tension should be upward and backward.

The parts are infiltrated and with a sharp scalpel the surgeon begins his excision. The assistant follows the scalpel closely with a compression pad. The area to be excised is quickly loosened and removed. The assistant's pad now covers the excised area. By

firm flat pressure with the fingers all bleeding is prevented. The surgeon now infiltrates the opposite side, maps out the segment to be excised and be-

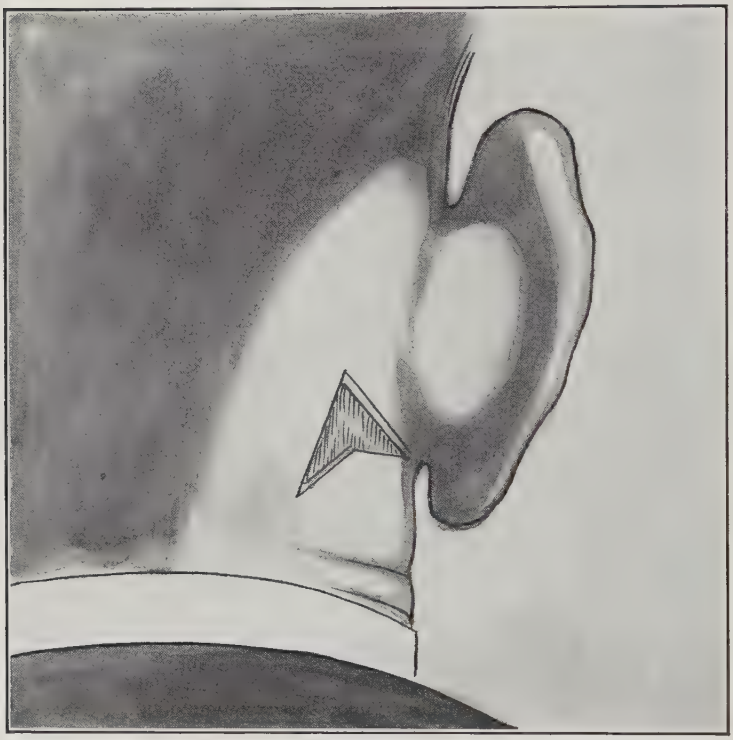

Fig. 59.—Another type of excision behind the ear. This operation chiefly useful as adjunct to face lifting operations.

gins the excision. His assistant follows the scalpel as before and in a moment the second area is removed and this too is covered by a compressing pad. The surgeon now returns to the side first operated

upon, turning up the pad which is preventing bleeding, snapping any bleeding points the moment they appear. As a pad is lifted it is easy to spot bleed-

Fig. 60.—Manner of closing.

ing points and they are nipped with the hemostats. It is not necessary to nip exactly the bleeding point. The surrounding tissues may be pinched with safety. Face tissues are resistant, tissues squeezed by hemostats do not slough. Spotting and nipping bleeding

points is very easy if the surgeon masters the technic. A pad can be raised, rolled up so to speak, and in a few seconds all bleeding points are safely controlled by the hemostats.

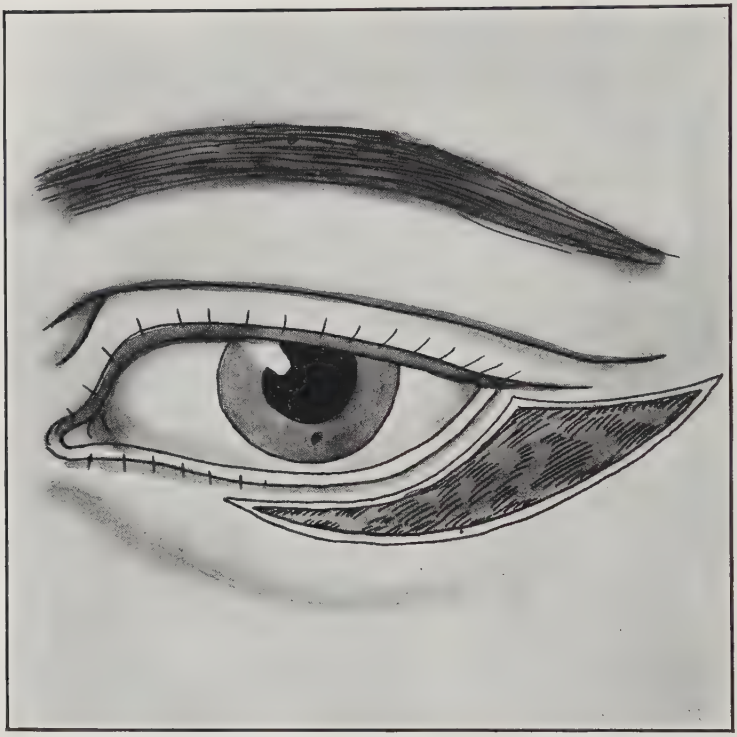

Fig. 61.—Manner of excising tissues in neighborhood of external canthus as an adjunct to face lifting operation.

Most bleeding vessels when firmly pinched with good hemostats even for a few minutes will close. When the operator has snapped all points on one side, and then the other side, he is ready to take off

the first hemostat applied. Taken off in rotation, it will usually be found that the bleeding is controlled. Should a vessel bleed when a forceps is removed,

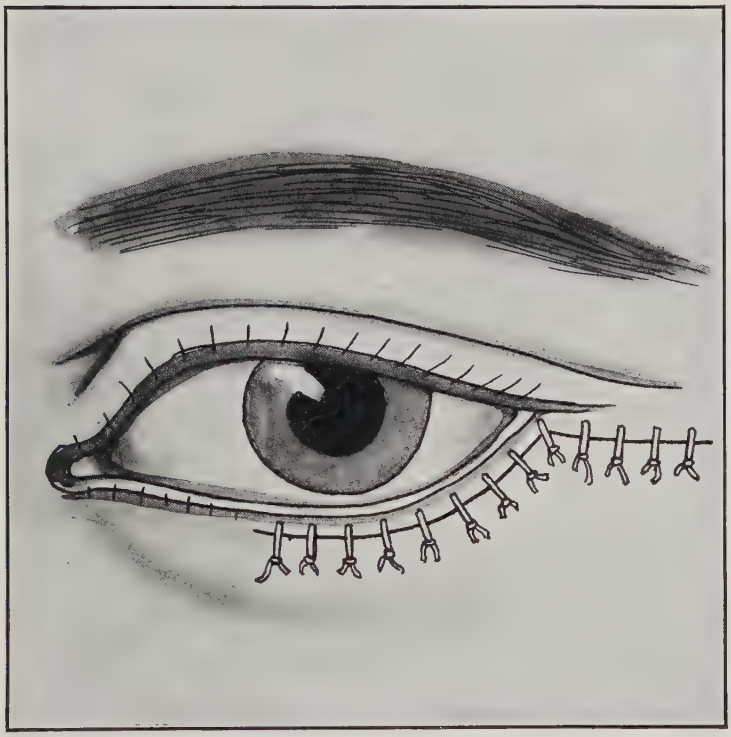

Fig. 62.—Manner of closing skin interval after excision of tissues.

the instrument may be re-applied and the point twisted. Torsion will control any bleeding which follows removal of the hemostats, provided the surgeon has mastered the knack of twisting.

The featural surgeon will usually wish to avoid buried ligatures. He will find torsion a help in controlling persistent bleeding. A little practice and a

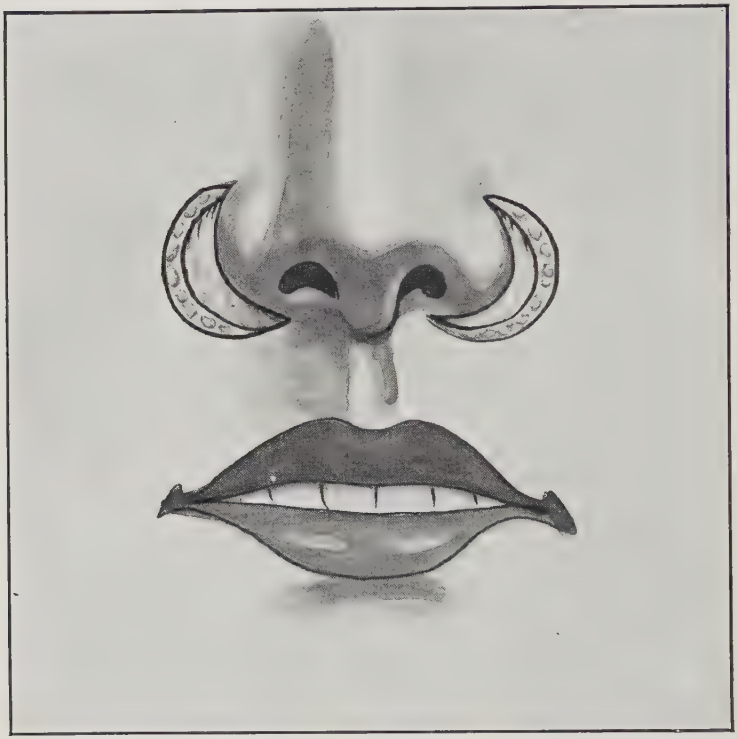

Fig. 63.—Excision in shadow of nose as adjunct to lifting operations.

little care will make this one of the quickest and easiest ways of controlling bleeding. To practice torsion, the surgeon grasps the tissues at the bleeding point, controlling the bleeding. Traction is then made, the forceps turned. The tissues partly give

way. Too much twisting will tear off the forceps, too little will not control the bleeding. Just the right amount is a matter of judgment. The surgeon will

Fig. 64.—Line of union must be placed close in the shadow of the nose.

soon learn the trick. Once mastered it is the quickest way to control persistent bleeding points.

When all bleeding has been controlled, the surgeon is ready to close his wound. If he is experienced the right amount has been removed. If inexperi-

enced, and cautious, too little may have been removed. If such is the case, the operator may draw together his tissues and find that the desired effect will not be produced by closing the wound. If such is the case more tissues may be excised. When the correct amount has been removed, the surgeon may close his wound in any of the ways outlined, or may modify these in several ways. The principles of plastic surgery apply. Wound edges are to be brought together and held. Seldom will an incision be made which will not be best closed with tension buttons or plates. These materially retard the cutting of stitches and should always be used in operations of this kind when closures are under tension.

As he closes, the surgeon should note carefully the effect of his operation. He should not realize several days after operation when healing has well advanced that he has produced a peculiar or undesired expression. The dangers of this have been exaggerated by critics of cosmetic surgery. Such critics will perhaps continue such condemnations and circulate stories to discourage women from having these operations performed.

As a matter of fact the surgeon who practices in this field will find these operations peculiarly safe and free from complications. The effects should invariably be excellent. The restoration of youthful

contour is the object of these operations. It will do this and do it as nothing else will.

Women may spend thousands having the skin treated. Every kind of treatment has been tried by women to check sagging of the skin. Massage is useless or harmful, drugs, lights, heat, cold, "skinning," it matters not what is tried, one or all are impotent, the only effective way to restore youthful contour to sagged features is by cutting out the slack.

The writer said this twenty years ago. It was true then, it is true today.

CHAPTER VII.

OPERATIONS FOR ALTERING THE PALPEBRAL FISSURE.

Operations for widening or narrowing the palpebral interval have been employed by specialists in eye surgery for many years. They are not essentially cosmetic operations but may be used for the relief of affections of the eyes.

Canthotomy is useful for the relief of blepharospasm and entropion, and also as an adjunct in the treatment of certain cases of trachoma.

Canthorrhaphy is indicated in long-standing facial paralysis, exophthalmic goiter and cicatrization which produce ectropion or exposure of the eyeball.

From a cosmetic standpoint only, canthotomy and canthoplasty are most often indicated. The former consists merely in splitting the external canthus, without suturing the conjunctiva and skin, to prevent reunion. Simple canthotomy may be performed without fear of bad results if but a short slit is made. Inasmuch as many women want only a slight effect this operation answers all purposes. The division is made outward after the conjunctiva has been rendered insensitive by dropping in a few drops of a two to four per cent. solution of novocain or

cocain. By means of a dropper the solution is placed in the external canthus and while so doing the head should be turned to one side to prevent the flow of the solution into the lachrymal ducts. The drops are repeated every two or three minutes for ten or fifteen minutes. The lids may then be rendered insensitive by the injection of a few drops hypodermically. A horizontal slit may be made with a small scissors to increase the separation of the lids. Stitches are not essential, provided the surgeon will see the patient each day and prevent reunion of the divided lids. As the lateral tarsal ligament is split horizontally it may be helpful to turn the scissors first obliquely upward in the wound and divide the fibers of the tarsal ligament above, then turn the scissors obliquely downward and divide the lower fibers. This further division may be done without disturbing the skin or conjunctiva, or the surgeon may avoid dividing the skin externally but may cut through the ligament and the conjunctiva.

In operations for the relief of spasm and other diseased conditions, the use of an eye speculum is recommended for holding apart the lids as much as possible. When the operation is done merely for its cosmetic effect and the surgeon does not have to deal with spasm or contracture of the tissues, the operation can be as well done, if not better, without the use of the speculum.

When sutures are inserted to unite conjunctiva and skin edges with a view of preventing union of divided tissues the operation is termed *canthoplasty*. In this operation the tissues are divided horizontally from the external canthus. The tarsal ligament is severed as previously described. The conjunctiva is then picked up with tissue forceps and sutured above, below and in the angle of the wound. Extremely fine silk is the best suture material for this purpose as it produces no irritation of the parts to cause pain immediately following operation.

While a few women will desire considerable division of the tissues, extending from the lateral canthus, there are limits to the extent of division which can be done advantageously for the purpose of altering the appearance. The attempt to produce a wide opening of the palpebral interval in order to make a woman have what appear to be unusually large eyes is unlikely to prove satisfactory in all respects and the surgeon should not attempt to produce an extreme effect by this operation. In many women the division of the tissues at the external angle of the palpebral interval for a very few millimeters outward, will produce the best effect. When this slight nicking into the tissues is practiced it is unnecessary to stitch; the surgeon may prevent reunion of the divided tissues by separating the cut each day. Should this slight division be in-

adequate further division may be practiced at any time, and there is no objection to the repeated division of these tissues.

When an operator takes proper care to render all tissues, including the conjunctival cul-de-sac under the lid angles, insensitive, there is no pain felt during the operation and for this reason the patient will not object if it be necessary to repeat the operation several times. It may be better to do the operation cautiously in this way in order that the surgeon can effectually study his results.

To insure that the desired effects will be realized the surgeon should have the patient photographed immediately before operation. After the first division a photograph should be made with the patient in the same attitude and at the same distance from the camera as previously. By comparison of the photographs the surgeon can better estimate his effects than by judging from memory alone.

Years ago the impression prevailed that canthotomy gave to the features an oriental cast. This is not the case. The condition which produced this effect was really the upward and outward traction upon the tissues at the external canthus from a poorly done or miscalculated face lift. The surgeon should be particularly careful in performing the face lift in the temporal region not to secure this effect for it tends to draw outward and upward the external

canthus and at the same time to narrow the palpebral interval. Canthotomy or canthoplasty tends to

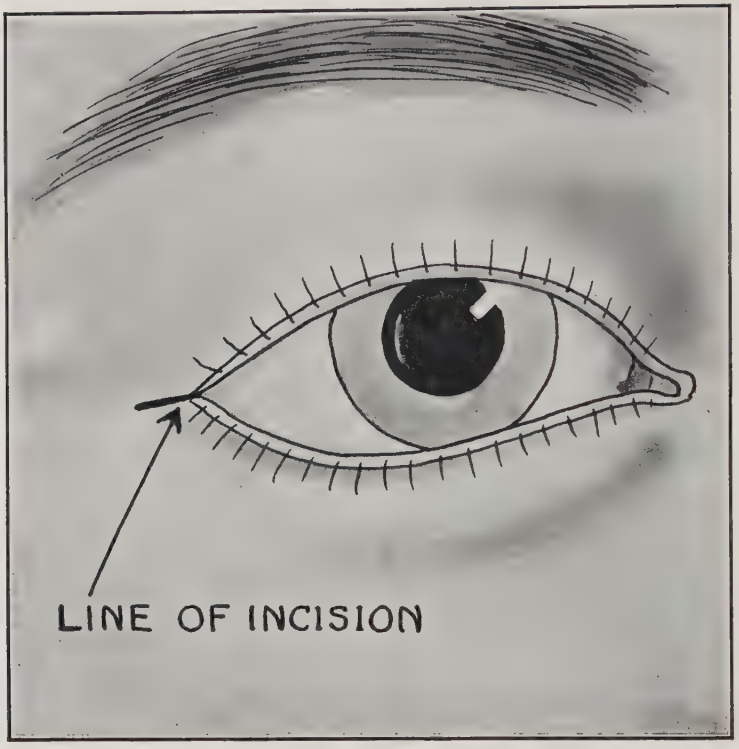

Fig. 65.—Illustrating line of incision in external canthotomy.

widen the palpebral interval and at the same time to slightly lengthen it.

Canthorrhaphy.—Union of the lids at the external canthus may be indicated for the protection of the eye in certain cases of facial paralysis. Persons suffering from this condition frequently consult the

plastic surgeon. We should not forget that facial paralysis is nearly always a temporary condition and

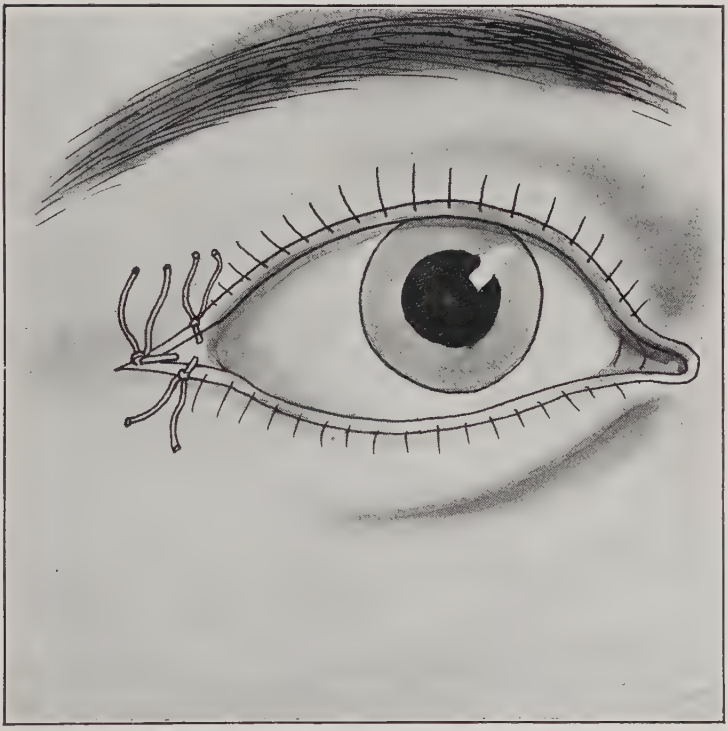

Fig. 66.—Illustrating method of suturing skin and conjunctiva to prevent reunion of tissues divided in canthotomy.

that the exposure of the eyeball is harmful only from the possibility of foreign bodies getting into the eye. Protective measures taken from the beginning will prevent the annoying irritations from which certain of these patients suffer. If the surgeon insists that

the patient with facial paralysis always wear goggles outdoors little foreign matter will get into the conjunctival recesses to cause annoyance. When the

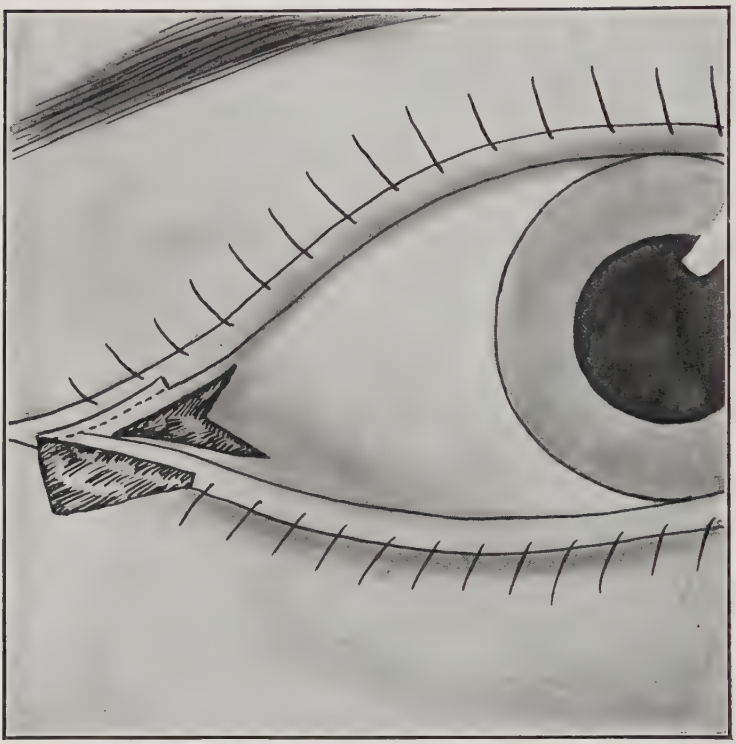

Fig. 67.—Tissues denuded in operation for lessening palpebral interval.

condition is of long-standing and gives little or no sign of improvement the lids may be partially drawn together at the external canthus.

Edge to edge closure of the lids may be attempted at the external canthus after denudation, but the

best chance of a lasting effect will follow operation in which the upper lid is drawn over the lower at the external angle. To perform this last-mentioned

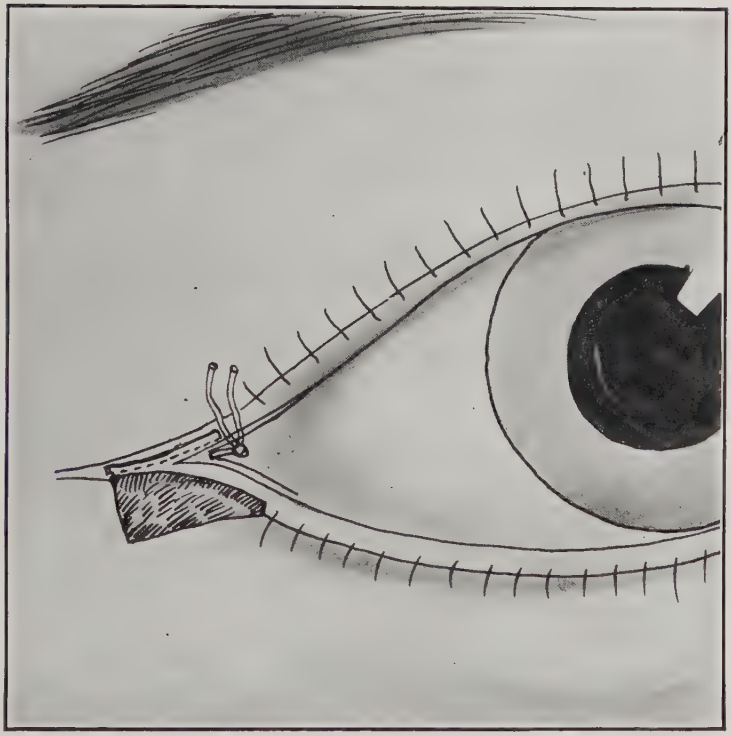

Fig. 68.—After excision of redundant conjunctiva interval closed by single stitch of fine gut.

operation the conjunctival sac and the external extremity of the lids should be cocainized by a hypodermic injection of a two per cent. solution. The object of the surgeon is to remove tissues from the under surface of the upper lid and the outer surface

of the lower lid and to pass a suture through the remaining thicknesses of the two lids so as to draw the upper lid angle over the denuded angle of the

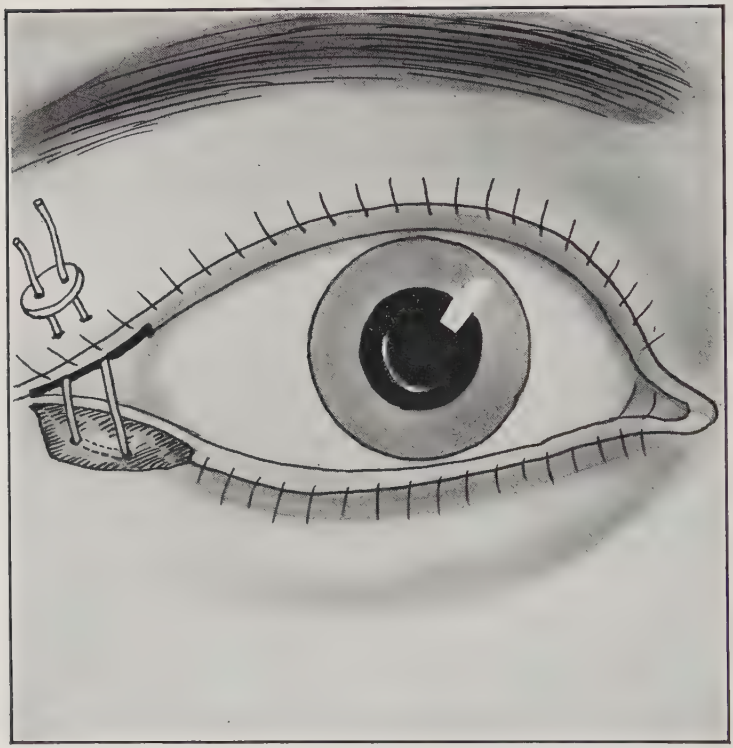

Fig. 69.—Manner of passing suture of heavy braided silk for drawing upper lid down over lower lid.

lower lid. Sufficient thickness of tissue should be removed from the lower lid to include the lash insertions and the same may be done from the upper lid though this is not essential here. Should lashes

growing from the upper lid be unnatural in appearance beyond the angle of the lids, electrolysis will easily remove them. Before the lids are drawn to-

Fig. 70.—Suture tied over button, bringing denuded areas together lessening palpebral interval.

gether in their new relation the conjunctiva should be loosened in the cul-de-sac and drawn toward the median line. When the stitch has been passed through the lid overlapping the parts the conjunctiva

may be trimmed and fastened beneath the lid edges so that an excessively deep recess is not left at this point. A braided silk suture is passed

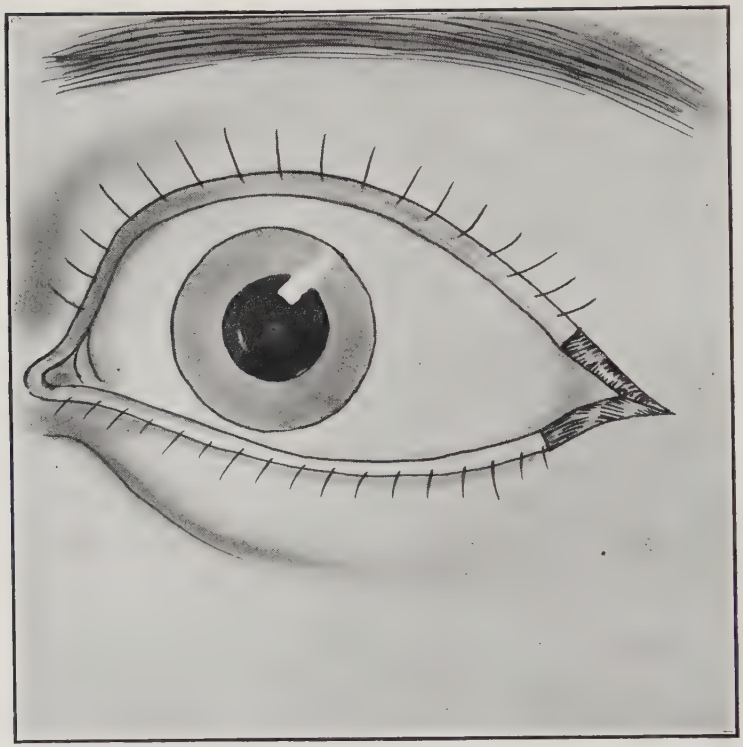

Fig. 71.—Margins of lid denuded in operation for lessening palpebral interval.

through the upper lid, then through the lower lid so as to form the so-called mattress suture. The needle passes twice through each lid and when the suture is tied the upper lid is drawn firmly down

over the lower lid at the external canthus. This suture may be tied over a button on the external surface of the upper lid to minimize cutting and con-

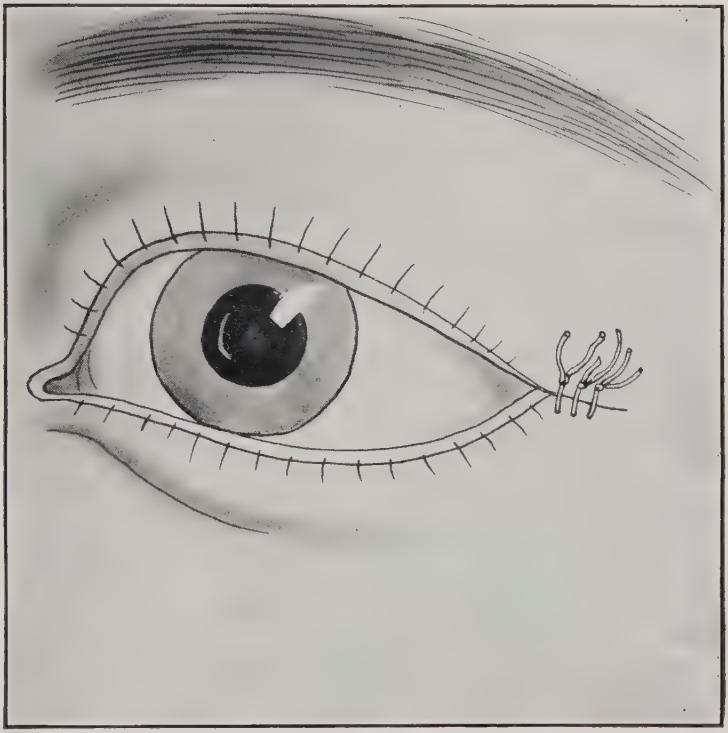

Fig. 72.—Sutures tied lessening palpebral interval. Aseptic healing essential to success.

sequent marking of the skin. Moderate tension will hold the parts in the new position and union will occur in five or six days. The suture if not tied tightly will leave only a slight mark. If a button is

not used and the skin is cut through by the stitch, considerable stitch marking will follow as the skin cut through is thin and will gape. Interrupted sutures may be used. They are inserted so as to appear at the edge of the upper lid and should include not merely a tiny nip of tissue but should draw the entire denuded area together. This is easily done and the sutures when tied will lie along the margin of the overlapping lid.

Patients suffering from exophthalmic goiter seek relief for the staring eye which sometimes accompanies this disorder. The plastic surgeon should not forget that this is a grave disease and the patient should be counselled to give particular attention to its care. Many patients with exophthalmic goiter have very rapid heart action and suffer from extreme debility. The featural surgeon will do well to urge these patients to forget the effects of the exophthalmos upon their appearance. Operating to narrow the palpebral interval in such cases is more or less like Nero fiddling while Rome burned.

Every patient suffering from undue prominence of the eye should be examined to make sure that the condition is not due to goiter. It is sufficient to determine that the patient has not the rapid heart action, the fine tremor, the swelling and pulsation of the thyroid gland. If these conditions exist operation for narrowing of the palpebral interval is contra-

indicated as a cosmetic operation. This disease is too serious for the patient to be giving attention to a trifling physical characteristic such as undue prominence of the eyeballs.

To narrow the palpebral interval by suture of lid margins the upper lid should be grasped by the cilia and lifted away from the eyeball. The point of a very fine hypodermic needle should be inserted into the lid margin, and a few drops of a two per cent. solution of cocain injected. The lower and the upper lid should be so treated in turn, and if the patient is quite nervous and contracts the palpebral muscles the entire conjunctiva may be cocainized by dropping in a few drops of cocain solution. Having rendered the tissues insensitive to pain the margins of the lids are denuded at the external canthus and a suture passed so that it will pass into the tarsal plate of the lid but not through it. The suture passed this way engages first the upper and then the lower lid external to the conjunctiva. When tied, the denuded margins of the external canthus are brought together. The degree of narrowing of the interval between the lids depends entirely upon the length of the denudation.

Not infrequently in periodicals circulating among women an operation is described as distinctly Oriental, that is the operation of external canthotomy for the enlarging of the palpebral interval.

External canthotomy is practiced frequently enough in this country by oculists in the treatment of diseased conditions of the eye.

The value of this operation for improving the appearance will vary according to the featural make-up of the individual. In properly selected cases carefully performed the effect of this operation is a satisfactory method of altering the appearance. The technic of the operation is simple enough. The conjunctiva should be rendered insensitive by the repeated dropping into the conjunctival sac of a two per cent. solution of cocain. By hypodermic injection the tissues at the external canthus should then be benumbed.

The blunt tip of a small pair of scissors is inserted under the lid juncture at the external canthus and the tissues cut through from conjunctiva to skin. The skin is then carefully stitched to the conjunctiva.

Should there be a redundancy of skin at the external canthus and "crow's feet," a portion of the redundant skin may be trimmed away and the cut skin sutured carefully to the free margin of the lid.

CHAPTER VIII.

OPERATIONS FOR "DOUBLE CHIN."

Slight under the chin sagging in women of average weight may best be controlled by the face lift. When this operation is effective no scars are made which are not hidden. If the incision in the face lift is carried down in front of the ear considerable softening of the well-marked double chin may be effected. In a few cases in addition to the face lift a slight but appreciable lift may be secured by removal of a segment of skin from behind the ear. Such excision should be carried high enough to take the slack from above and low enough to reach the level of the ear lobe. The scar left by this operation will be shaded by the ear and in women will not be seen. Professional women of the stage who submit to operations for lessening those characteristics of the face which indicate middle age are frequently willing to hide surgical scars under cosmetics and are well satisfied with any operation which tends to restore the contour of youth. These patients may be subjected to several types of direct excision of the tissues which go to make up the double chin.

The usual operation for removing the excess fat and cellular tissue which constitute the double chin, as practiced by many featural surgeons, is the ex-

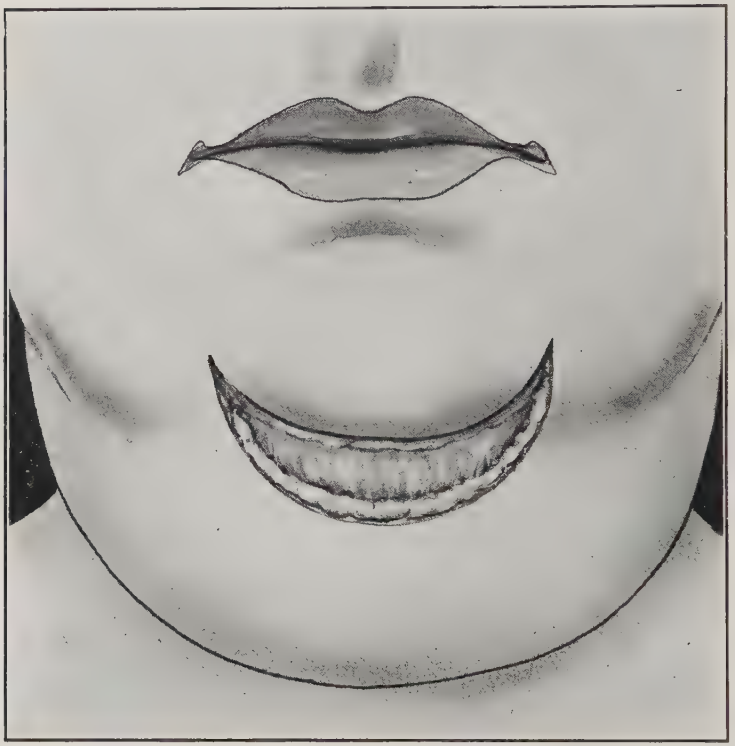

Fig. 73.—High excision for double chin, placing scar line where it resembles more or less the natural line seen at this point.

cision through an incision directly across the most prominent part of the double chin. This is the least desirable route for the extirpation of these excess tissues. When they extend entirely across the neck

in a broad thick bulge, it may be best to attack from as low down as possible. In such operation a rather long incision is made across the neck following

Fig. 74.—Manner of closing after excision of skin and fatty tissues.

closely the natural line of the neck at about this point. The operator then pushing the skin upward loosens and trims away the fatty impregnated cellular tissues. Hemorrhage may be sharp from some of

the vessels supplying the mass of tissue to be excised, and in such cases it is well to control the bleeding as the operation progresses. The incision

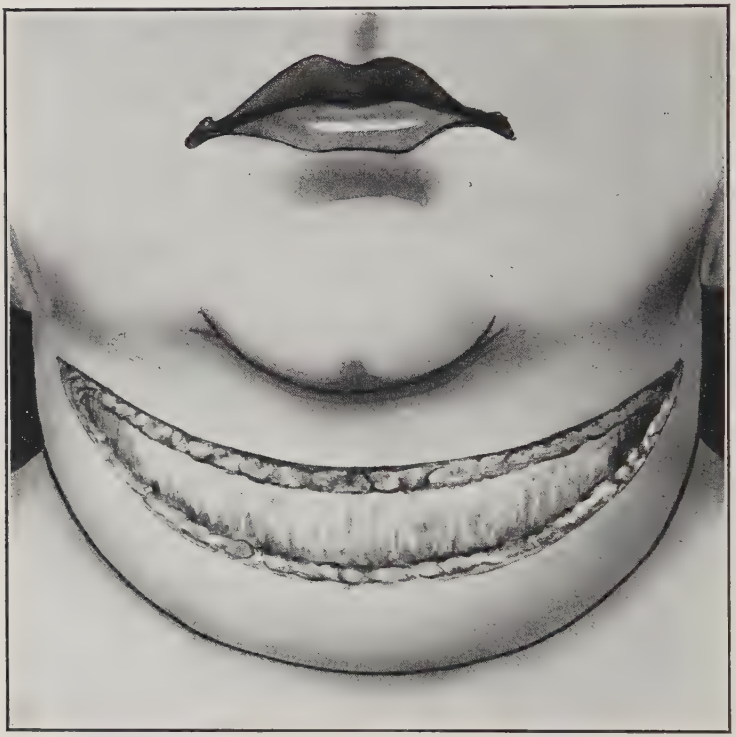

Fig. 75.—Excision of double chin across its most prominent diameter. This operation usually produces a considerable scar.

is long enough to make room for a number of hemostats so that as freely bleeding points occur they are quickly snapped. A few minutes' pressure with a hemostat usually suffices to control these vessels.

Symmetrical removal of the fat impregnated tissues should be the object of the surgeon so that after reduction there is no unnatural irregularity. When

Fig. 76.—Manner of closing after double chin excision.

all tissue has been removed, and the operator desires to conclude the operation so as to produce the best possible results, the skin should be gently stretched and a careful estimate made of the amount which may be removed without exposing the wound

edges to too much tension. This excess skin should be trimmed away with great care so that perfectly smooth, even skin edges are left to be approximated.

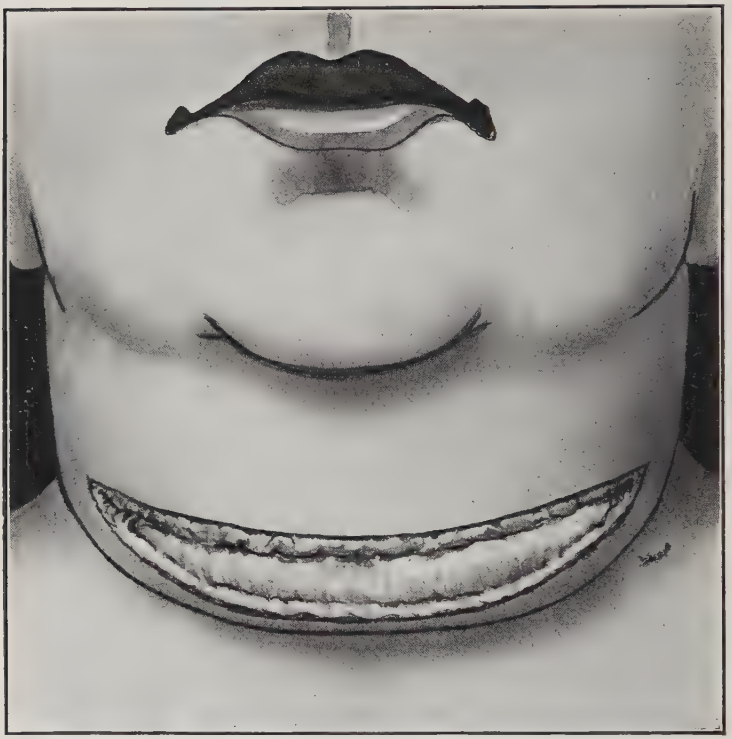

Fig. 77.—Low excision for double chin. Some women prefer scars at this point when double chin operation must be performed.

All bleeding should be completely controlled. If when the operator is ready to close the skin wound there is still some oozing from the depths of the wound a hot irrigation may help to control it and

free the recesses of the wound cavity from blood clots. For this purpose the chinosol normal salt solution can be used to good advantage.

Fig. 78.—Wound closed. Scar low on neck.

Skin closure should be accomplished with interrupted sutures placed close together so that perfect skin approximation with the least possible tension is secured. The tissues above the wound should be tightly strapped up with surgeon's plaster and the

dressings arranged so that without disturbance of the healing tissues the skin sutures may be removed early.

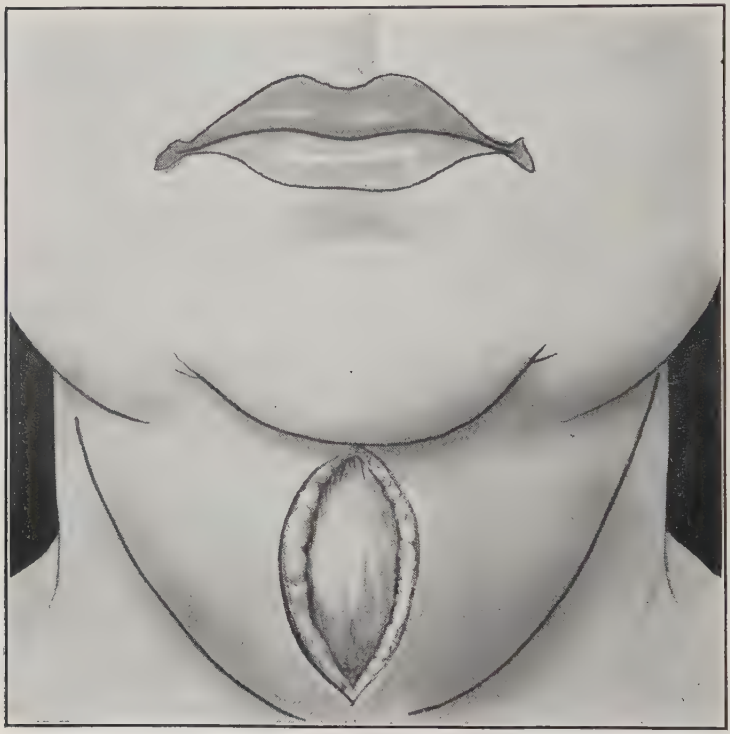

Fig. 79.—Perpendicular excision in median line adapted to certain types of double chin.

In certain cases, rather than incise directly over the most prominent part of the double chin when access is possible through a comparatively short incision, the tissues to be removed may be reached

from above. There is below the chin a natural line which usually marks the beginning of the double chin. This line may be used to very good advant-

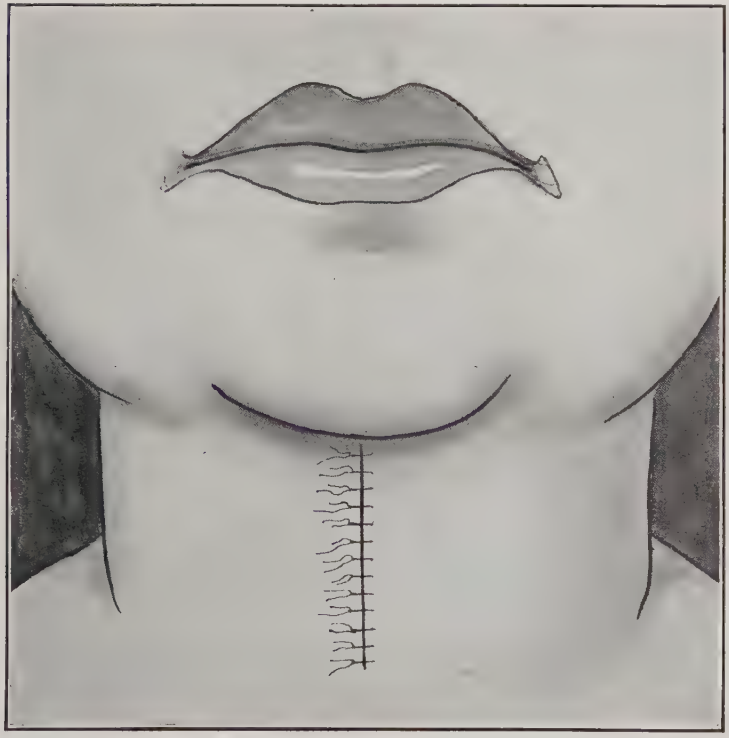

Fig. 80.—Manner of closing with closely applied interrupted sutures.

age for the skin incision. When the skin is divided at this point the skin is lifted and the operator removes the excess tissues as evenly as possible. The wound orifice is smaller in this operation than that

which may be made below so that there may be somewhat less freedom of access to the tissues to be removed. The operator should carefully control all

Fig. 81.—Double excision through openings on each side of median line.

bleeding as he progresses so that his work may be accurate. When the excision of subcutaneous tissues has been completed, the operator will usually find it advantageous to trim away a certain amount

of skin. Great care should be taken to remove as much as possible yet not to sacrifice so much that approximation is under undue tension. Much skin

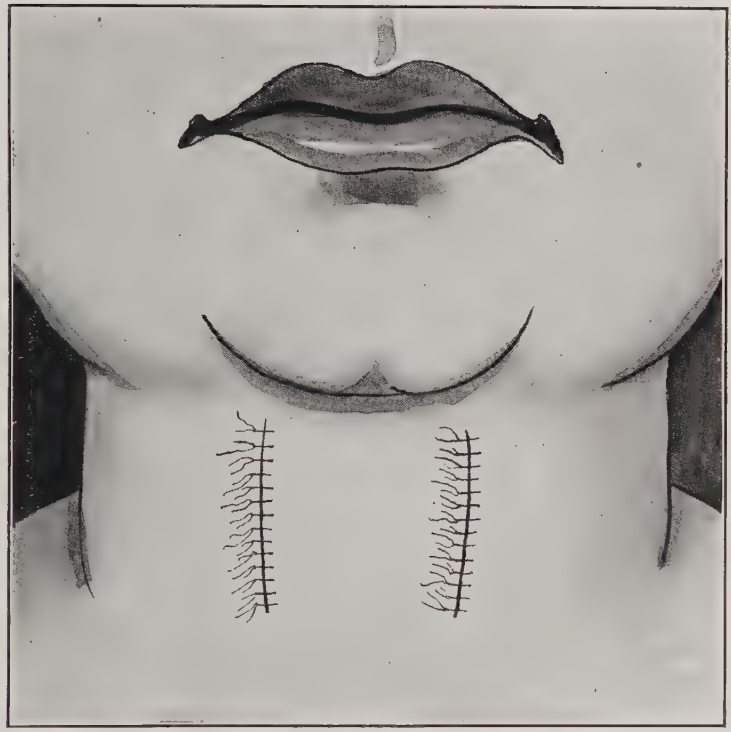

Fig. 82.—Manner of closing.

tension here is almost sure to cause more scarring than is desirable. The skin interval must be very carefully closed so that the approximation is perpectly smooth and even. A dressing should be applied, after tissues below the incision have been

closely strapped with surgeon's plaster. The sutures should be removed in two or three days.

Median line incision is suitable for a few cases where there is a small pounch-like double just under the chin, and in other cases where there is a pouch with a tendency to stringiness two incisions may be made, each about three-fourths of an inch from the median line. These incisions when closed make perpendicular lines which may closely resemble the natural creases frequently seen in patients inclined to be stringy.

The lift behind the ear described under the face-lifting operations may be used to aid in overcoming some of the effects of double chin.

The double chin may also be attacked from either the angle of the jaw or somewhat behind this point. Operations through incisions which more or less parallel the natural neck lines should give comparatively good results. Sometimes a much lined neck may be altered by excisions behind, close to the hair-line. In women, an incision well back on the neck is well shaded by the hair, and the neck may be greatly altered by such operation.

CHAPTER IX.

SUBCUTANEOUS SECTIONING OF FACE AND NECK STRUCTURES FOR ERADICATING LINES AND WRINKLES.

Tenotomy and myotomy are old surgical procedures. Section of skeletal muscles or their tendons produces striking results. Such procedures and their effects were known long before present day surgery. Hamstringing of horses was the common practice of ancient warriors. Tenotomy of a skeletal muscle usually promptly renders the muscle useless, but sectioning of face muscles has not the same striking effect; in fact, sectioning these muscles to reduce action enough to satisfy the surgeon is sometimes difficult. The reason for this is that muscles of the face have indefinite bony attachments, their function is not greatly affected by separation of these attachments, and the surgeon, if he would secure pronounced effects, must do what is not particularly easy, that is, subcutaneously dissect loose the rather intimate attachments of the muscle to the overlying skin.

Facial sectionings are undermining operations, or at least are more like undermining operations than anything else. The surgeon must pass his knife, necessarily very small, just through the skin and then

along close under the skin. He must go through the skin because splitting the skin will not give the effect desired, but he cannot go too far beneath the skin as he will then merely form a cavity in the areolar tissues. Division of the cellular tissues accomplishes no more than splitting the layers of the true skin. Splitting the layers of the true skin is followed by prompt reunion without noticeable effect upon the muscle fibers and undermining beneath the muscle fibers is equally futile.

As considerable sectioning of the tissues is necessary in these muscle sectioning operations, considerable subcutaneous hemorrhage may follow. This may be minimized by the use of the compresses immediately after the operation is completed. Such compression continued for ten or fifteen minutes helps reduce subcutaneous hemorrhage and consequent discoloration. Patients should be warned to expect more or less ecchymosis Careful antiseptic technic invariably prevents infection. Punctures made by the myotome should be sealed with collodion. A light dressing should be placed over the parts undermined.

Subcutaneous Section of the Corrugator Supercilii.

After novocain infiltration the muscle should be brought into action by the patient in order that the

surgeon may better define its location. The myotome is passed under it from above, and the fibers sectioned from their intimate attachments to the skin. A considerable undermining usually is required if much effect upon the action of the muscle is to follow. With many patients who have pronounced frown lines, section should also be made close to the bone. The operator, with the anatomical attachment in the mind's eye, passes his knife downward until it touches the orbital crest, and then, sweeping the knife along the attachment of the muscle to the bone, attempts to section the fibers as completely as possible at this point. Sometimes, when the surgeon has done his work as thoroughly as possible, the effect upon the frown is only partial. Fibers of the orbicularis may also be sectioned with a view of adding to the effect, nevertheless the operator may see only a partial disappearance of the frown lines, and his operation may have to be repeated one or more times to secure the desired softening of the skin line he wishes to overcome.

In the chapter on face-lifting by excision of tissues above the hair line, semilunar excisions above and external to the frontal eminences are described. Such excisions may be made with safety and without fear of disfiguring scar as the scar will be hidden in the hair. This excision correctly made will draw the tissues somewhat upward and laterally and in con-

junction with thorough subcutaneous sectioning of the corrugator muscles should effectually overcome scowl lines.

Fibers of the orbicularis palpebrarum, toward the median line of the face, can be sectioned with a view to aiding in the eradication of frown lines, those externally may be sectioned to reduce or eradicate the so-called "crow's feet." Bony attachment of muscles of sphincteral type is indefinite and separation of these attachments does not prevent action of such muscles as the orbicularis palpebrarum. Division of the fibers at various points, passing the knife beneath the fibers and cutting carefully toward the skin surface, may be practiced with safety. Sectioning at short intervals or repeated sectionings at different times are safe procedures.

Section of the Occipito-frontalis.

Frontal fibers of the occipito-frontalis may be cut with a view to softening transverse forehead lines, though lifting operations are much more effective in eradicating these lines, and as the operation for removing a segment either in the median line or a segment from each side of the middle line is easily performed and the scar line is hidden in the hair, this operation will usually be the preferable one for the correction of frontal corrugations.

CHAPTER X.

SUBCUTANEOUS SECTIONING FOR SOFTENING NASOLABIAL LINES.

While certain types are more inclined to develop nasolabial lines than others, these lines really are largely the result of habits of expression. The patient who has a tendency to develop such lines, just as the patient who inclines to droop the angles of the mouth, can avoid progressive increase of such expressions, and by attention over a period of time combined with voluntary exercise of the muscles may overcome both expressions. To suggest the systematic exercise of the muscles which will counteract development of these expression lines and rid the features of lines already present, or to suggest exercises which tend to prevent drooping of mouth angles and ultimately develop the much desired turned-up angles, is the duty of the surgeon.

When immediate effects are desired and well-marked nasolabial lines are already present, subcutaneous sectioning of these facial muscles requires the practicable dissection of the muscular bands from the overlying skin.

To facilitate sectioning the operator has the patient exaggerate the muscular action responsible for

the lines and, with muscles in action the knife is passed through the skin and swept about, freeing attachments of the muscles to the skin.

Sectioning the Platysma Myoides.

Bands of the platysma show prominently in many women of slight build when other characteristics of advancing years are not present. Platysma sections can be made in any part of the neck if care is taken by the operator. Studies of the blood supply, particularly the venous supply, may aid the surgeon in avoiding excessive subcutaneous hemorrhage. Moderate compression usually prevents much venous hemorrhage in these operations. Care should be taken in passing the knife beneath the bands of platysma to make sure that the knife is kept in close contact with the under surface of the muscles, as below the platysma are large vessels and nerves, division of which can cause troublesome complications. By closely hugging the muscle bands to be divided and cutting from below upward, that is toward the skin surface, these divisions can be made without danger to the patient.

Pronounced stringiness about the neck may be overcome by the excision of excess tissues, but the surgeon must be discreet in recommending extensive excisions, for some scarring nearly always follows operations of this kind. The traces of the surgeon's

knife may be hidden by cosmetics, and as such operations do much to give to a woman youthful appearance, stage favorites may then add to their years of employment. It is a notable fact that America worships youth and actresses soon learn that youthful lines are essential to secure contracts. These women, therefore, cheerfully cover scars where women in private life might regret their presence.

Section of the Orbicularis Palpebrarum Muscle.

This is an operation for "crow's feet." Its effects are sometimes of considerable value in eradicating these lines, especially when such lines are prematurely formed.

The location of the muscle may be easily determined by having the patient contract it firmly. This is done when the eye is shut tightly.

If nerve blocking is not used, externally for three-quarters of an inch above and below the external canthus of the eye, the tissues should be infiltrated with a one per cent. solution of cocain.

The muscle is then contracted and the sectioning knife passed obliquely downward and outward from close proximity to the external canthus. The point of the knife being beyond the outer margin of the orbicularis muscle, the fibers of the muscle are cut through with a sawing motion, the sectioning being

carried into the true skin. The knife is then withdrawn until its point nearly emerges from the skin and then its direction is turned obliquely upward and outward and it is again passed under the fibers of the muscle. In this way the muscle may be cut several times through a single puncture of the skin.

Considerable discoloration of the skin follows this operation as the result of ecchymosis. Hemorrhage through the point of puncture will stop of its own accord owing to the smallness of the opening through which the blood may escape.

CHAPTER XI.

SECTIONING AS AN AID TO OTHER OPERATIONS.

When the face lift or the lift at the base of the nose is not indicated or in cases where additional effects are desired the muscles involved in forming the nasolabial lines may be sectioned subcutaneously. The action of the muscles should be exaggerated by the patient, at the request of the surgeon. With the muscles tense and outlined as much as possible, the surgeon passes the myotome from below along the attachment of the muscles to the skin and severs them by a subcutaneous dissection. When passage of the knife at one point does not give sufficient access to the parts the instrument may be withdrawn and inserted at other points either from above or below. As in all sectionings of the face the division of the fibers involved calls for considerable subcutaneous division of tissues.

The Nasolabial Lines.

Several methods may be used to overcome the decided nasolabial lines seen in some women. When sagging of the soft parts are responsible, the face lifting operations of the temporal region are indicated. Some patients have a well shadowed recess

at the base of the nasal wing and a small crescent of tissue may be removed from the skin and the tissues so sutured that the lines of union are hidden by the alæ nasi. The skin is carefully cut through close to the nasal junction. The incision is carried around the end of the nose and the tissues tentatively drawn upward and inward toward the median line. Surplus tissue is removed, hemostasis effected, and the parts carefully sutured with interrupted sutures. These sutures should be placed only under moderate tension. Great care should be taken to insure perfect approximation of skin edges. Sutures should be removed within three days.

Voluntary Exercises for Influencing the Lines About the Mouth.

Certain facial types are more prone to develop lines about the mouth than others. Many women, through habit of expression, have marred the appearance of the mouth. A surgeon who will advise all women, who have either the lines about the mouth, or who show the effects of compression or drooping of the mouth angles, to exercise the muscles of this region each day, may help such patients to materially alter the appearance of the mouth.

It is not hard to see the fault in these cases, and it is a matter of advising the patient to do those things which are likely to counteract the fault.

When mouth angles droop, and the woman daily before the mirror, exercises the lifting muscles, in a comparatively short time control over the angles of the mouth develops rapidly and the patient will be able to turn up mouth angles to a degree which is highly pleasing to her. As a result of such exercises, the mouth outline will be appreciably altered. Similar effects are possible in counteracting the results of compression of the lips and other faults of the region.

CHAPTER XII.

SCOWL LINES.

Scowl lines are among the featural imperfections which the featural surgeon is called upon to treat. They are seen in many people, some scarcely out of their teens, and not a few patients are neurasthenically sensitive regarding them. The mental distress of some women where these lines have formed can be appreciated only by the surgeon who is consulted regarding their removal, and it is the writer's experience that these lines are sometimes an actual menace to the health of the nervous systems of their possessors.

Refractive errors and habit are direct causes of the condition. All cases should be carefully examined ophthalmoscopically by a competent oculist. The correction of eye-strain by glasses should be insisted upon in all cases where the examination reveals the presence of an error of refraction. As a rule, habit is controllable to a large extent. In such cases care to prevent scowling during the day coupled with the wearing of plasters at night may be followed by the gradual disappearance of fairly well-formed lines

When lines are deep and habit fixed, surgical treatment offers about the only relief. Section of the cor-

rugator supercilii muscles beneath the inner one-third of the eyebrow is one of the successful means of eradicating the lines of the frown.

To perform this operation tissues beneath the inner one-third of the brow should be thoroughly infiltrated from skin to bone. A very narrow bladed knife should then be inserted through the skin just above the brow and passed downward to the bone. The point is then turned and pushed onward so as to include practically all the tissues beneath the brow and by a sawing motion the tissues are cut until the edge of the knife has cut through all subcutaneous tissues and into the true skin. Single sectioning may be practiced, though it is advisable and quite safe to section the muscle obliquely at more than one point through a single puncture. The corrugator muscle is intimately connected with the skin and section of the muscle only partially checks its action. Operation may be facilitated by having the patient make voluntary efforts to contract the muscle. Sectioning should extend well into the true skin. Sharp bleeding may follow withdrawal of the knife, but owing to the limited space for its escape through the minute opening made by the passage of the knife no fear need be felt and under compression after a few moments it will stop of its own accord. Considerable subcutaneous effusion of blood follows this operation.

CHAPTER XIII.

EXCISION OF SCARS.

The careful competent surgeon can do much to lessen the noticeable characteristics of many scars. Many different forms of treatment have been suggested, yet when conditions are favorable excision and resuturing will do much more to diminish a scar than any other treatment. The linear scar lends itself to excision and careful closure. Broad, flat scars, such as those from burns, may frequently be much improved by the excision of irregular portions. Much has been claimed for skin grafting, yet grafts are far too conspicuous, even when they take perfectly, to be as desirable as some surgeons contend. The writer hesitates to resort to grafting on exposed areas. Smooth scars may be readily hidden by cosmetics. This should be pointed out to women and in such cases operation should not be urged.

Linear scars, at all wide or irregular, can nearly always be improved by excision, followed by careful closing. A scalpel should be used and a sharp, even cut made completely beyond the surface limits of the scar. This incision is carried along one side and then the other. The skin should be cut entirely

through. The scar can then be picked up and dissected free. Scarring below the skin is unimportant. The scarring in the skin, if possible, is completely removed. The wound edges should approximate without too great tension.

Tension can be reduced by undermining. In certain regions free undermining is possible, and large gaps in the integument may be closed without too much tension. In other situations, as about the face, too much undermining and sliding the tissues may deform the features. The operator should have this in mind when operating on the face.

The manner of forming skin edges in past years has engaged the interest of surgeons to no little degree. Methods for dividing the skin and ways of suturing have frequently been the subjects of discussions in surgical gatherings. The actual technic of cutting and suturing are less important than the care which is taken to secure accurate approximation. The merits of different technics for skin incision and closure have been emphasized by many surgeons, some contending that the skin should be cut straight through, others advocating a slanting incision and overlapping of the edges. Years ago when it was the universal custom to suture wounds tightly, to pass stitches deeply through the tissues and strangulate masses within the grasp of the sutures, and to leave stitches in for five or six days,

the buried suture and the running stitch beneath the skin had many advocates. All such technical errors should be avoided by the surgeon who would successfully operate upon the face and consequently he will not be likely to be as partial to buried sutures or the running stitch beneath the skin.

Wounds of the face must be sutured with the most absolute accuracy. Stitches must pass deeply enough to draw all severed tissues together, but they should not pass far below the wound and include a large mass of tissue. The surgeon will find that sutures passed with a needle which will not cut its way through the skin will give the best results. Round needles without sharp edges meet this requirement. Sutures of exposed skin are always placed close together, so that no possible gaps may form between stitches. Sutures should be tied just tight enough to secure perfect closure without excess pressure to cause rapid cutting of the stitches. Healing must be by first intention so that stitches may be carefully removed in two or three days.

In excising scars, the scar tissue beneath the skin need not be dissected out. The skin should be cut completely through, the epidermal portion of the scar excised, but connective tissues which are even and which can be readily covered by drawing the skin over them may be left with impunity. When

the dermal portion of a scar has been completely removed the manner of closing and aseptic healing will determine the character of the result.

Removal of Pigmented Spots.—Small pigmented moles can usually be best removed with the electric needle. The needle should be attached to the negative pole, the circuit completed through a moist pad electrode and a current used as strong as the patient can bear without too much discomfort. Overlying epidermal cells soften and with a scraping motion the surgeon can remove them. With the current still on, the point of the needle can be used to pick out the cells containing the discoloration. This must be done thoroughly to prevent recurrence of the mole.

This same technic is perhaps the most satisfactory for removing powder and tattoo marks. A little practice may be necessary to develop the technic but when it is mastered these conditions can be overcome without danger of ill effects.

Electrolysis takes time. The operator who is unwilling to spend considerable time upon a case should not consider electrolytic methods.

CHAPTER XIV.

FORMATION OF THE DIMPLE.

The reader of this book may be inclined to condemn the operation for the formation of a dimple, but the surgeon practicing in this field will have women consult him who know that the operation can be done, and he will find that they are determined to have it done. If he cares the surgeon can refuse to do such an operation. That is really the status of all cosmetic surgery, the surgeon can take an interest in these operations, study the technic, and learn to do them and do them well or deny their value and have nothing to do with this kind of surgery. Many operations not ordinarily looked upon as cosmetic are largely for the sake of altering appearance. Deformities which really do not cripple are often corrected because the deviation from the usual is embarrassing. Dentistry up to recent years has been nearly all cosmetic surgery, crowns, bridges and other dental creations being of more value to the patient from the standpoint of appearance than from actual value to health.

If the surgeon decides that he cares to perform an operation for the formation of a dimple he has the choice of one of two routes. The operation may

be performed through a short incision through the skin or, the surgeon may evert the mucosa of the cheek through the mouth and make all incisions from within. This latter technic eliminates the external scar which is formed in the bottom of the dimple when the skin is incised.

In either of these operations infiltration of the areas to be incised should be practiced with a weak cocain or procain solution. The operation may then be performed without pain.

When the operation is performed through the skin a narrow bladed knife is passed through the skin at the site where it is desired to form the dimple. This point should usually be chosen by the surgeon and he can best decide by having the patient smile and note where there is the most natural tendency for this to occur.

The puncture should parallel the long axis of the face and should be only from one-eighth to one-tenth of an inch in length. The point of the knife should pass through the skin and then the cellular and fatty tissues should be drawn through the puncture with forceps. By reaching around beneath the skin with the forceps, the cellular and fatty tissues may be drawn out and snipped off. Each case presents its own problem as to just how much tissue should be removed. If the surgeon operates through the skin he may use the strong cocain or

procain solutions and not disturb normal relations by too much distention of the tissues. By so doing the surgeon of limited experience can probably succeed best in estimating the correct amount of tissue to remove. Following the snipping away of the cellular tissues the deeper layers of the true skin should be cut away slightly and then the skin edges of the wound are everted by a suture so passed as to turn inward the wound margins.

Cutting away of the tissues alone may be sufficient for the formation of a satisfactory dimple. In such cases the surgeon merely inverts the skin edges after all bleeding has stopped and dresses with collodion, favoring as much as possible inversion of the skin edges. When a suture is passed a more marked effect may be secured. Fine silk on a very short full curved needle should be used. The needle point is passed through the edge of the skin on one side, it is swept about and brought out so that it passes through the true skin on the opposite side. When tied this suture should invert the skin edges. The suture should be removed about the third day.

Operation performed through the mouth should be through a fairly free incision. The line of incision should parallel more or less the nasolabial line or it may be slightly angular if the operator elect. Tissue should be cut through to the true skin at the point where the surgeon desires to form the

dimple. The fatty and cellular tissues are cut away and a slight amount of the true skin. Bleeding may be controlled by compression of the tissues between the fingers. When the surgeon has excised sufficient tissues, the wound edges may be searched for bleeding points and these controlled by torsion. The tissues are then closed with sutures.

CHAPTER XV.

REDUCTION OF THE BULBOUS NASAL TIP.

While the bulbous nasal tip varies widely in appearance, there are two general types from the surgeon's standpoint. One type has only soft parts enlarged, the cartilages being approximately normal in size and shape, the other type has large and frequently irregularly formed cartilages, which not only add to the size but give an uneven or knobby outline. Both conditions may be present, in which case excision includes removal of both cartilaginous and cellular tissue excesses.

Whenever possible, the operation upon these parts should be performed through the nasal orifices. It is true that direct access may allow the surgeon to work with more ease, and there may be less surgical disturbance of tissues, yet scar lines on the prominent nasal tip should be avoided if possible. Incisions within the nostril parallelling the nasal wings will usually give access to the thickened tissues. Sometimes an incision close under the tip on one or both sides of the septum will allow most ready removal of the tissues involved. In either of these cases the parts are everted into the nostril and

the surgeon excises them with scalpel or scissors, whichever is more convenient to him. First incisions are followed by a sharp temporary hemorrhage. To facilitate operation, the tissues may be incised on one side, and then while the assistant compresses the incised tissues, the surgeon makes his incision on the opposite side. This side is then compressed by the assistant and the surgeon returns to the side first incised. Hemorrhage by this time may have ceased so that the operator may turn his operative field into view and excise the tissues he has elected to remove.

By loosening the tissues of the septum just above the columnar cartilages the tip may be everted and good visual access to the involved parts may be secured. Should the surgeon find that such access is not satisfactory he may cut the cartilage free, making a skin incision across the septum. This will allow him to evert the tissues, turning the tip inside out, so to speak. Of course, the more skill a surgeon has, the quicker his judgment, the less he will actually have to see. Many of these operations can be performed with ease, others will tax the skill of the best surgeon, for the result of the excision should be a perfectly smooth uniform natural appearing nasal tip. The writer has seen nasal tips which have been split in the median line to allow the surgeon to trim down excesses of this part. This

manner of operating compares with the external incision for removing the nasal hump. It may allow of very good results, the scar line may be so slight

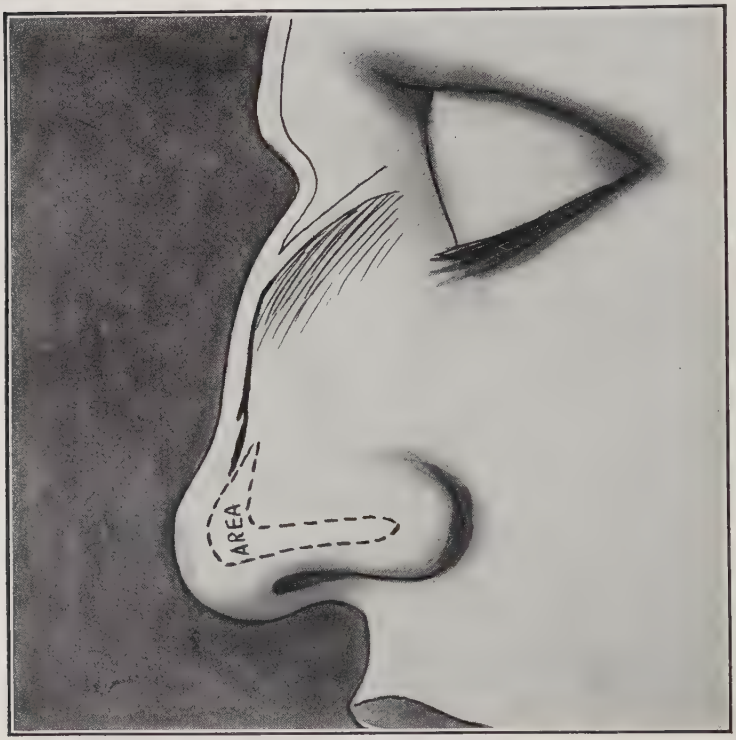

Fig. 83.—One type of excision indicated for certain forms of bulbous nasal tip.

as to escape the notice of the patient's associates, but there is risk of a noticeable scar, and it certainly will be in a prominent part of the face. With enough care and patience these operations can be

performed so that external scars are avoided or they will be trifling and placed in a protected region.

Before these operations are performed a careful

Fig. 84.—Dotted lines illustrate area of soft parts to be excised in certain types of bulbous tips.

toilet of the nasal passage should be performed in addition to the external cleansing, the writer prefers to pack the nasal passages with gauze and cotton soaked in normal salt chinosol solution. The

operation can then be performed with the patient lying on his back on the operating table and the blood will not flow down into the nose. Most pa-

Fig. 85.—The tip may be loosened by an incision across the septum. Parts are turned up and soft parts excised to reduce bulbous nasal tip or excessively long nose. The parts are then drawn back in place and sutured as illustrated.

tients are a nuisance when blood is allowed to flow into the pharynx as they insist upon sitting up to spit it out, and sometimes they will insist on blow-

ing the nose, a harmful practice in these cases as it is almost sure to invite infection.

When the thickening is at the base of the alæ,

Fig. 86.—Other types of nose require excisions from the tip of the nose itself.

the incisions within may be made so that access is obtained at this point though external incisions at the base of the alæ at its point of juncture with the face are fairly well shaded and likely to pass unnoticed after operation.

Suturing of all external incisions should be done with the greatest care. The skin edges should be approximated with perfect evenness. No bleeding should be left to be controlled by sutures when tied. Hemostasis should be complete before skin sutures are tied.

It is frequently the practice of general surgeons to depend upon the sutures closing a wound to complete hemostasis. This is not good practice in surgery of the face.

Wounds within the nose may or may not be sutured, when excision of tissues is completed. As a rule sutures are not required, and are of little advantage. It is true that closely approximated tissues heal together very quickly, but the sutures within the nose are sometimes troublesome to place accurately and interfere with draining away of wound secretions so that it is really a question whether or not the patient is better off with these wounds within the nose sutured or left open.

CHAPTER XVI.

PARTIAL STENOSIS OF THE NOSE.

Doctor Roe, of Rochester, New York, many years ago, described a flap operation for the restoration of the partially stenosed nasal tip. In the first edition of this book in 1907, the writer described an operation in which the flaps are formed from within and the nasal orifice enlarged. By this technic no visible scar is left following operation, and it is the writer's belief, that such operation should be the operation of election in these nasal conditions which show more or less stenosis. In some cases, stenosis may be such, that considerable median incision is required to allow eversion of the tissues. Any redundant tissues may then be removed and the skin which has been left intact may be turned up into the nose and held in place by sutures. These stitches can be passed by very short curved needles, such as are used by eye surgeons in suturing the conjunctiva.

Complete Nasal Stenosis.

This may be incised with a view of turning out the tissues and preserving skin flaps which may be turned up into the nasal passage to insure healing

without recurrence of the stenosis. Distortion may add to the difficulties but the plastic surgeon who understands well the various principles of this type of surgery can usually devise a method which will

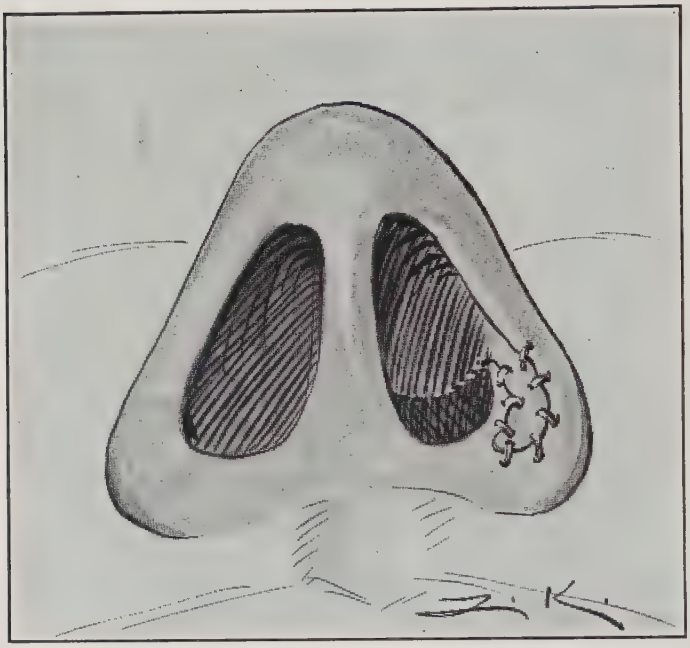

Fig. 87.—Flap operation recommended years ago by Dr. Roe, of Rochester, New York, for partial stenosis of the nose.

allow restoration without unnecessarily mutilating the parts. It is not the object of this book to go into the subject of the pronounced deformities from birth deficiencies or injury, for this class of surgery has been extensively considered in all the systems of surgery published during the last one hundred years.

Nasal Deviations.

Sometimes the tip is deviated to one or the other side of the face. Such deviation can be overcome

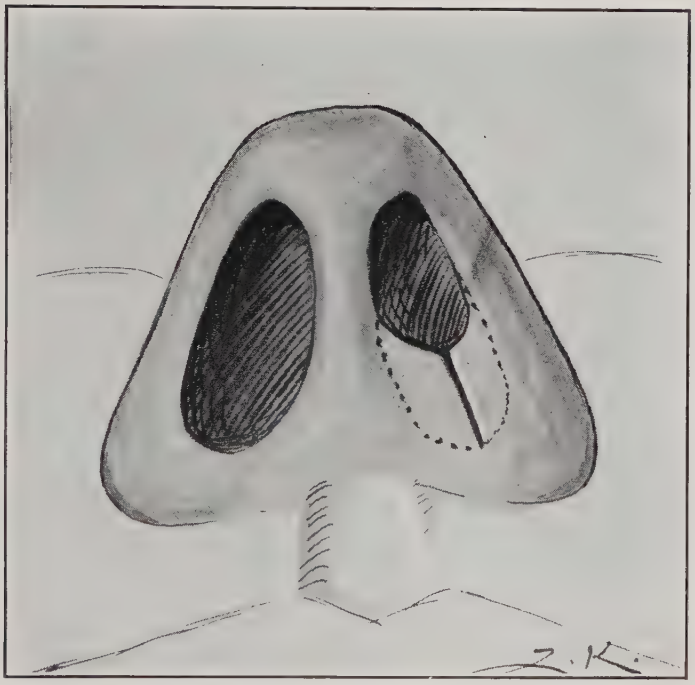

Fig. 88.—Operation recommended by the writer for partial stenosis.

by freely loosening the tip and anchoring it in the median line with sutures passed within the nose. To insure success, the tip must be freely loosened so that it returns to the median line without resistance.

After sutures are passed to hold the nose in the corrected position, slipping of the tissues may be further insured against by molding a cardboard,

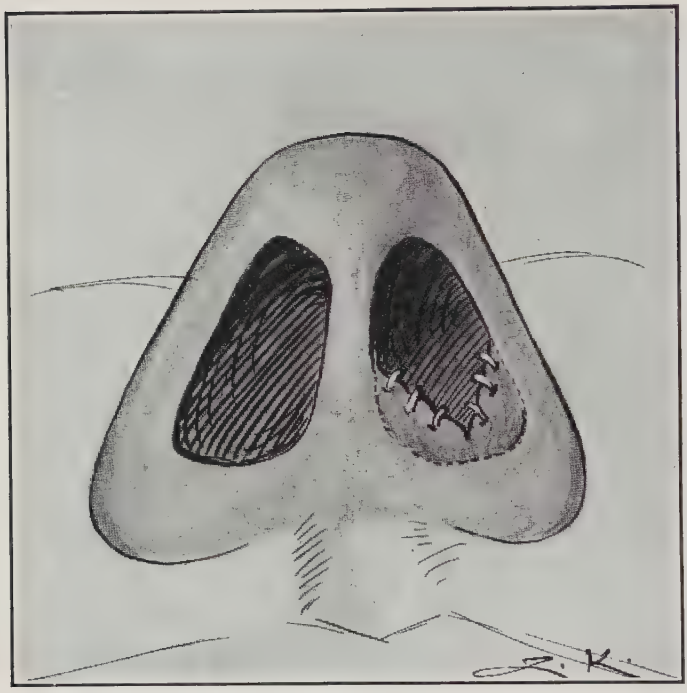

Fig. 89.—Flaps turned up within the nose. No external scars after this operation.

hard rubber or celluloid splint. This is done by taking a piece of cardboard, soaking it in an antiseptic solution until it is perfectly soft, then after underlaying it with gauze it is pressed over the nose and moulded to an exact fit. It is corporated in

dressings and as soon as dry will form a firm splint holding the tissues in the desired position. Hard rubber may be softened in boiling water and moulded as desired. Packing may also be used within the nose to hold alæ and tip in the position elected by the surgeon. The nasal orifices alone should not be packed, but when packing is used it should be carried well back into the nose to insure stability of the pack. Gauze soaked in chinosol normal salt solution makes a convenient antiseptic pack. The old fashioned splints used in nasal septum operations may also be used. These splints are hollow and allow the air to pass in and out, a matter of no great importance. In collapsed alæ a bit of rubber tubing sterilized and inserted may make elastic outward pressure to advantage in certain cases.

CHAPTER XVII.

OUTSTANDING ALÆ NASI.

Wide outstanding alæ nasi decidedly influence the personal appearance. It may be the single featural

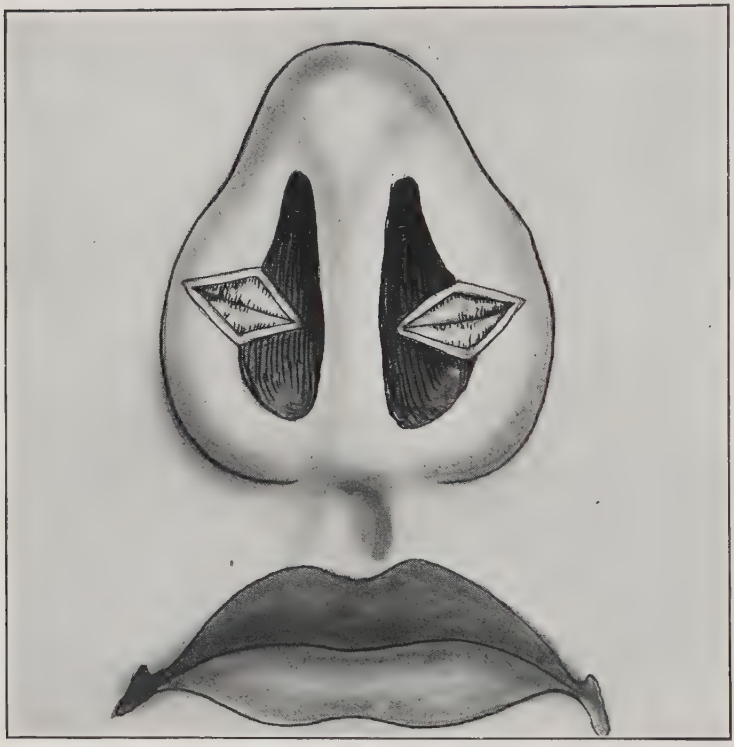

Fig. 90.—Excision of tissues for outstanding alæ nasi.

defect requiring correction, yet such correction is not as simple as the inexperienced would anticipate.

In operating upon outstanding alæ nasi it is not to be forgotten that absolute uniformity is essential

to a pleasing result. If it is possible by deep internal sectioning of the alæ to cause a drooping inward of the outstanding nasal wings, this operation

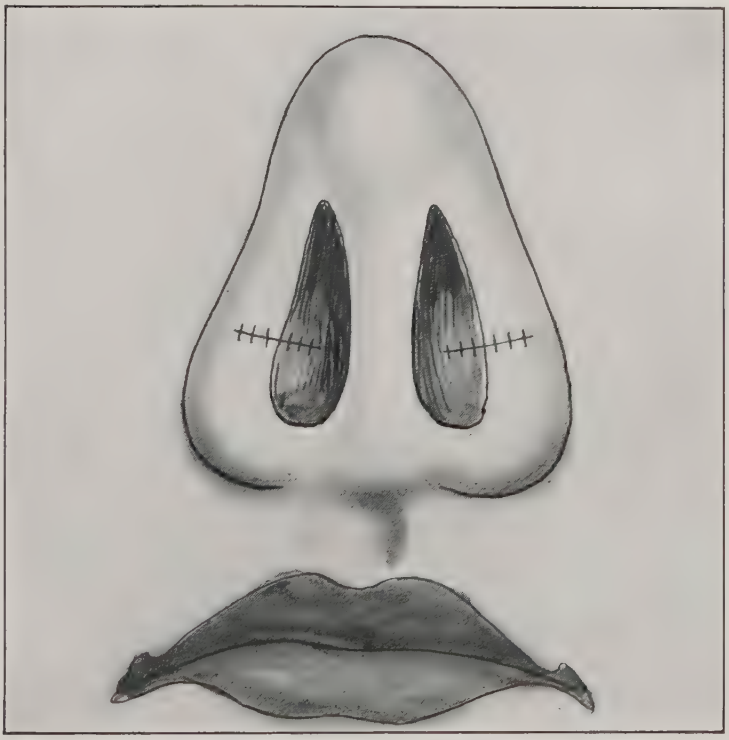

Fig. 91.—Manner of concluding operation.

is to be preferred to any other. The removal of a segment of the inner surface of the alæ may be necessary to secure the desired result. When a segment is removed and sutures are passed within the nose to approximate the wedge-shaped interval

left by the excision care should be exercised that sutures are tied uniformly and that a good bite of tissue is included in the sweep of the needle point

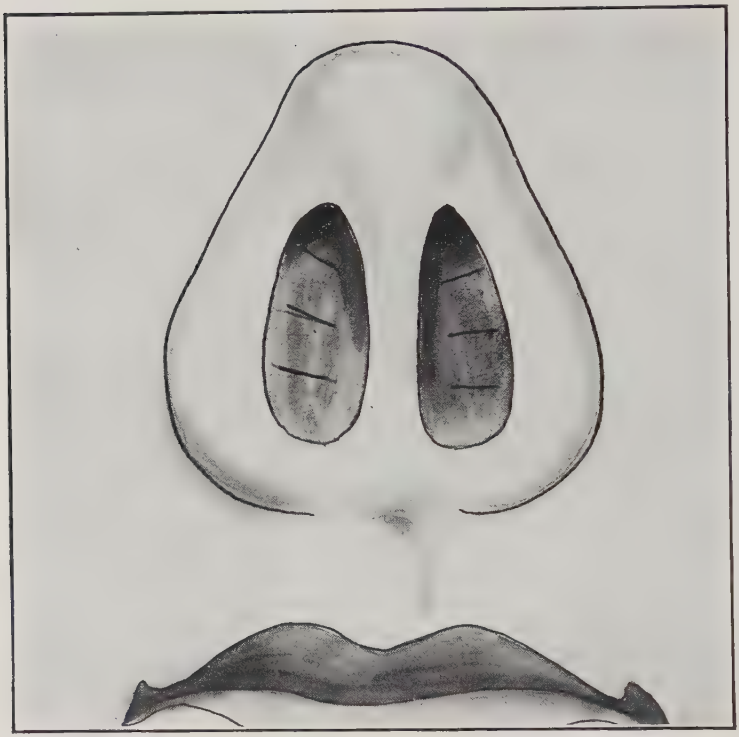

Fig. 92.—Multiple incisions within the nose for outstanding alæ.

so that the sutures will not cut out and allow one or the other side to arch outward producing that least to be desired result, asymmetry.

Sometimes a conspicuous feature, outstanding

alæ nasi, may be dealt with by multiple incisions within the nose, or the excision of a wedge of tissue. Either operation should be followed by dress-

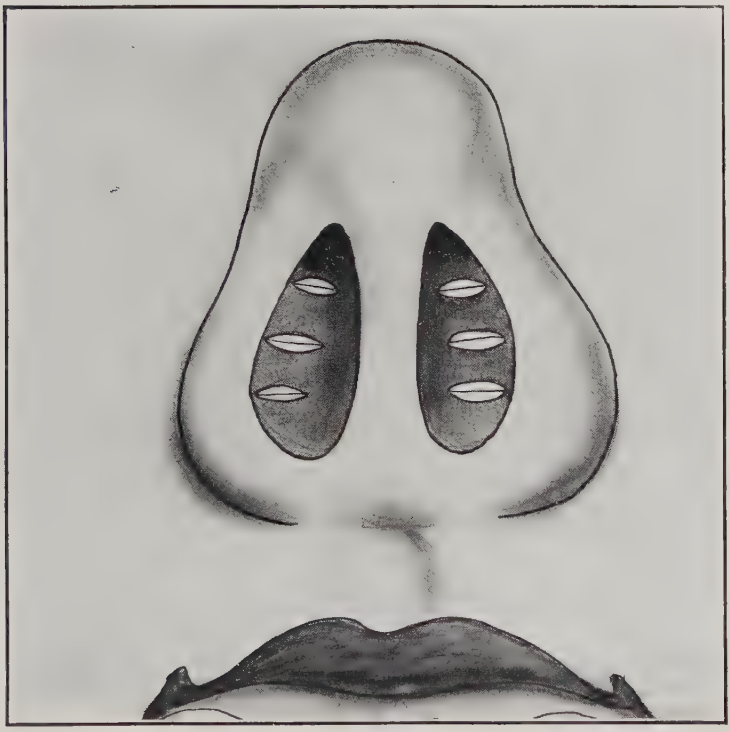

Fig. 93.—Incisions allowed to gape when alæ are drawn in by sutures.

ing with either the moulded cardboard splint or by the use of a few layers of plaster-of-Paris bandage. When a splint of plaster is moulded the patient should be left upon the table until the splint has set firmly,

during which time it may be well for an assistant to continue gentle pressure with the fingers to insure

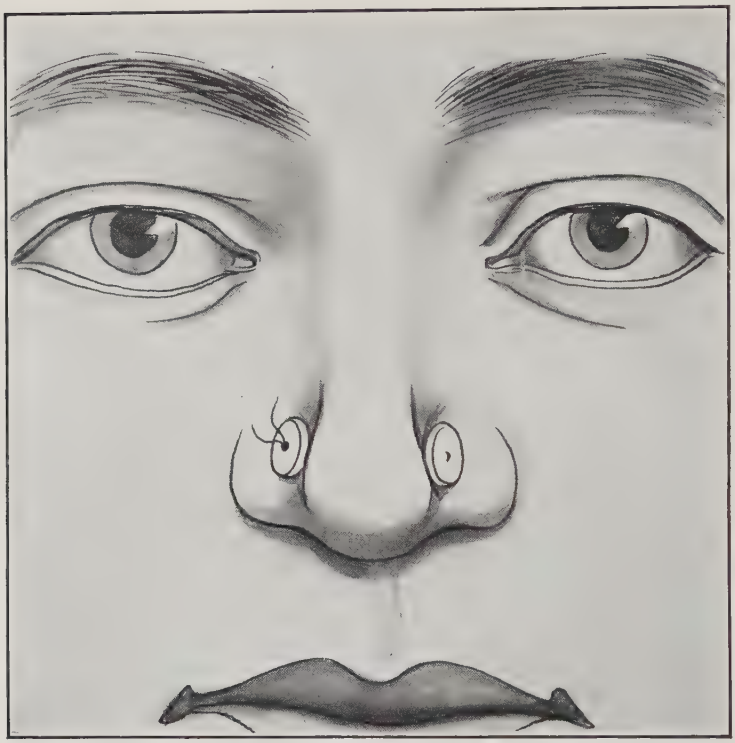

Fig. 94.—Suture may be passed entirely through nose to hold outstanding alæ nasi in altered position.

the proper fit of the plaster. After it is firmly set, it should be sealed in place with collodion.

CHAPTER XVIII.

OPERATIONS FOR HUMP NOSE THROUGH THE NASAL ORIFICES.

To those without experience with the operation, the surgical removal of a hump through the nasal orifices would appear difficult. Surgeons, who have given the matter no thought, have condemned this operation, as a result of their inexperience. Of course, the operation for the removal of a hump through an incision through the skin alongside the hump or along the bridge of the nose appears much easier, but observation will show one that such is not the case, and that the tip of the nose is readily pushed upward, so that the access to the hump is direct and the operation can be performed with the same accuracy through the nasal orifices as it can be performed if the skin is cut through above the hump. The advantage of the operation through the orifices of the nose is that absolutely no outside scar is made and nothing can be seen which indicates that any surgery has been performed upon the nose.

Nerve blocking is effective or analgesia may be accomplished as in any of the featural operations by the injection of solutions of novocain. The solution should be about one-half per cent. strength and

made up with normal salt solution. The needle is passed along the free margin of the nasal bones and the analgesia made complete before any incision is made. When the operator has injected the dilute solutions some tumefaction will necessarily follow sufficient injection to produce complete insensitiveness to pain, but this need not interfere with the operator. The tissues about the hump should be rendered insensitive by pushing the needle down against the nasal bones and the injections made as the needle point is pressed along the surface of the bone. By thus infiltrating against the bone the tissues can be lifted away from the bone and the bone itself cut away without pain.

After the usual antiseptic precautions to render the skin of the face sterile, the nasal passages should be swabbed out with the normal salt chinosol solution, 1 : 5000. This swabbing may best be done with small cotton or gauze pledgets. Both nasal passages should be packed before operation.

As these operations are best performed with the patient lying upon a table both nasal passages should be packed. The writer is in the habit of passing into the nose a strip of gauze saturated in the 1 : 5000 chinosol solution, and then finishing the packing with bits of cotton also saturated with this solution. Both passages are rather firmly packed so that the blood cannot flow down into the throat.

Patients then will not be trying to sit up and spit out blood clots during the operation.

Bleeding is sometimes rather sharp when the incision is first made loosening the soft parts along the margins of the nasal bones and when the soft parts about the hump are freed. This bleeding is unimportant and should be disregarded by the operator as the amount of blood lost will be of no consequence.

During the operation more or less obstruction of the surgeon's vision may occur from blood clotting in the field. To clear this it is convenient to have a one or two ounce rubber bulb syringe fitted with a large glass dropper tip. This filled with the 1 : 5000 chinosol solution can be used to wash out the operative area. This, too, if rather warm or slightly hot tends to check any oozing which persists during the operation. The clearing of the field with this simple irrigation requires a few seconds and is a convenience which any surgeon will appreciate in operations within the nose. It will be found helpful in other operations performed within the nose.

With the patient recumbent, the nasal passages packed, the tissues insensitive, the operator takes a sharp knife and steadying the tip passes the knife within the nose, and divides the tissues along the margin of the nasal bone. The knife is then passed within the opposite orifice and the tissues freed

along the lower margin of the nasal bone. The nose is then tipped to one side and the incisions brought together over the septum. The tip is now

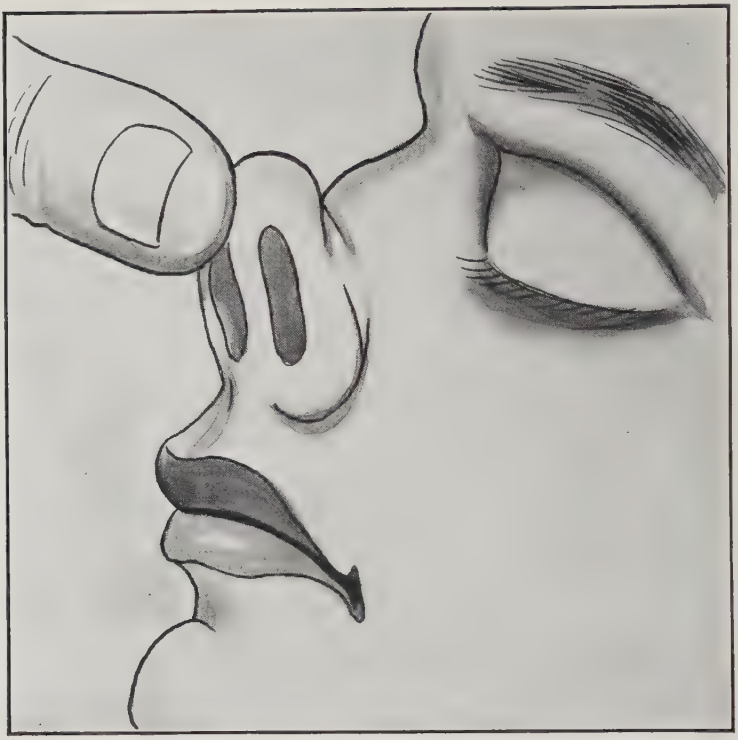

Fig. 95.—When the tip is tilted the surgeon will realize how readily accessible the hump is through the nostrils.

pressed high up and a dissector or elevator used to free the tissues about the hump to be removed. Humps are cut away with a stout knife, gouge or chisel. Care should be taken not to shatter the

hump or drive a chisel too far under it. It should be cut through so that a little dressing with a sharp rasp will leave a smooth symmetrical condition. A

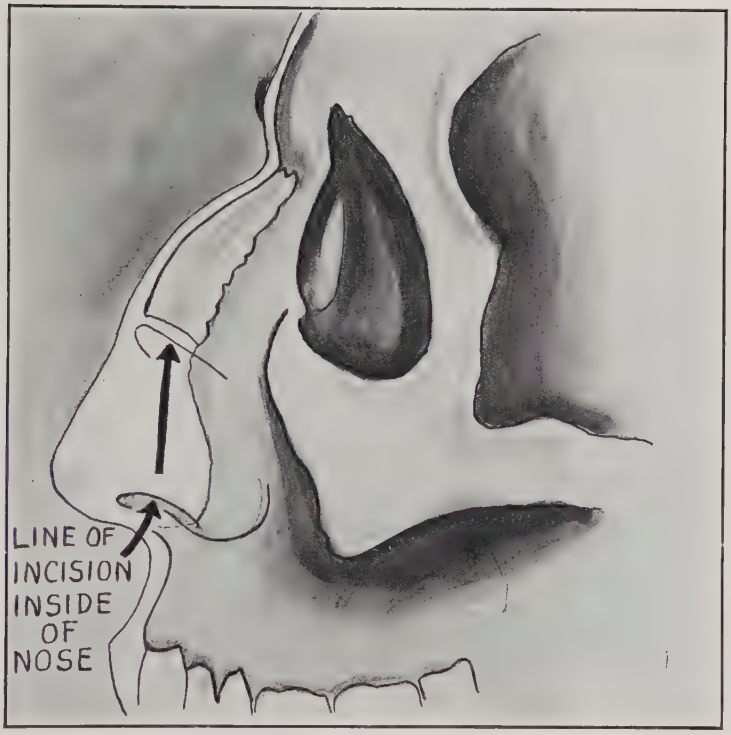

Fig. 96.—Diagrammatic illustration of site of internal incision in operation on hump nose through the nostrils.

good deal of time must be taken by the surgeon with limited experience in removing the hump, otherwise the case will prove disappointing, for the slightest unevenness of the bony tissues will show with startling clearness through the soft parts after the operation.

There is danger in trying to cut off a large hard hump, and sometimes even a small hump, of lifting hump and nasal bones in a solid mass. The de-

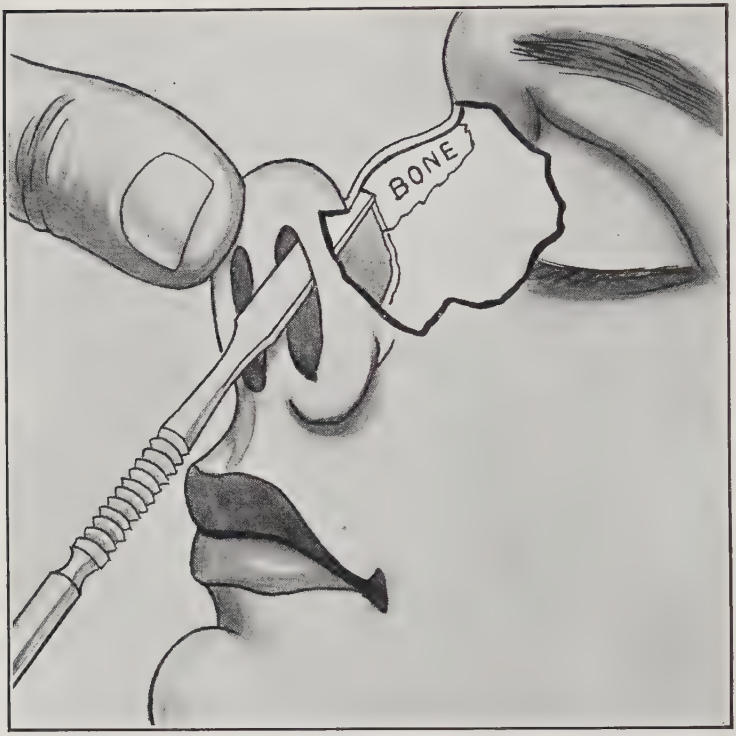

Fig. 97.—Manner of using chisel. The hump should be carefully shaved off. Unless very careful the surgeon can loosen the nasal bones, an accident which should be avoided.

taching of one or the other or of both of these bones is an accident to be avoided as it may cause the operator to produce an inaccuracy in dressing the

bones down to the correct proportions so that the after condition appears far from natural.

It is better to spend a good deal of time and care in rasping the bones down to the proportions desired than to cut out a chunk with the chisel and fail to get the parts smooth and even. Bleeding can be controlled by external pressure. There is usually sharp bleeding during this operation just after the soft parts have been loosened freely. These operations may be done through a short incision on one side manipulating through it to remove the hump and smooth the tissues, but the beginner in surgery will find that free loosening of the tissues below the hump will make the operation easier for him. The all-important thing is to get a smooth natural reduction in the hump. Attention to hemorrhage and to everything else should be made secondary to this.

When the operator has smoothed the tissues to his satisfaction and with the syringe has thoroughly washed out any bits of bone or cartilage digital compression for a few minutes will stop any bleeding which persists. When all bleeding has stopped the nasal passages are unpacked and the patient permitted to go home.

This concludes the operation as no stitching should be done within the nose. A bandage in these cases is not essential. Of course the patient should have

been told before operation that considerable ecchymosis may follow the operation so that it is not unusual to have two "black eyes" as an after effect. The nasal passages may be sprayed or gently irrigated with the chinosol normal salt solution as an after treatment, though as a matter of fact the healing of these cases seldom if ever manifests any evidences of infection.

CHAPTER XIX.

REMOVAL OF HUMP NOSE THROUGH SKIN INCISIONS.

While the experienced plastic surgeon will always choose the operation through the nasal orifices except in cases of severe chronic infections of the nasal passages, many surgeons hesitate to attempt operation on humps through the nasal orifices and prefer to make a skin incision. Those who think this is an easy way and who expect to produce excellent results with little care because of a choice of this route may be surprised to find that first-class results call for just as much care as do operations through the nose.

Operations through skin incisions may be performed through short or through comparatively free incisions. These incisions may be either parallel to the nose or across it. Incision along the median line is supposed to be less likely to heal as closely as one along the side of the nose, though actually there is little difference in placing them in either situation when this phase is considered. With the hump removed it is possible to draw the skin edges together without tension. The incision along the side of the nose is supposed to be in a more shaded position and

to be less likely to show. This is in a small measure true. No surgeon should place an incision along either the median line or the side of the nose unless

Fig. 98.—External incision along side of nose to enable removal of hump.

he has had sufficient experience to be very sure of his technic so that he may expect the most trifling lines to be left. The inverted V across the nose has been used, the lines of the incision parallelling the naso-

labial lines. There is no particular advantage or disadvantage to any of these lines of attack; they all give excellent access to the hump and they necessitate

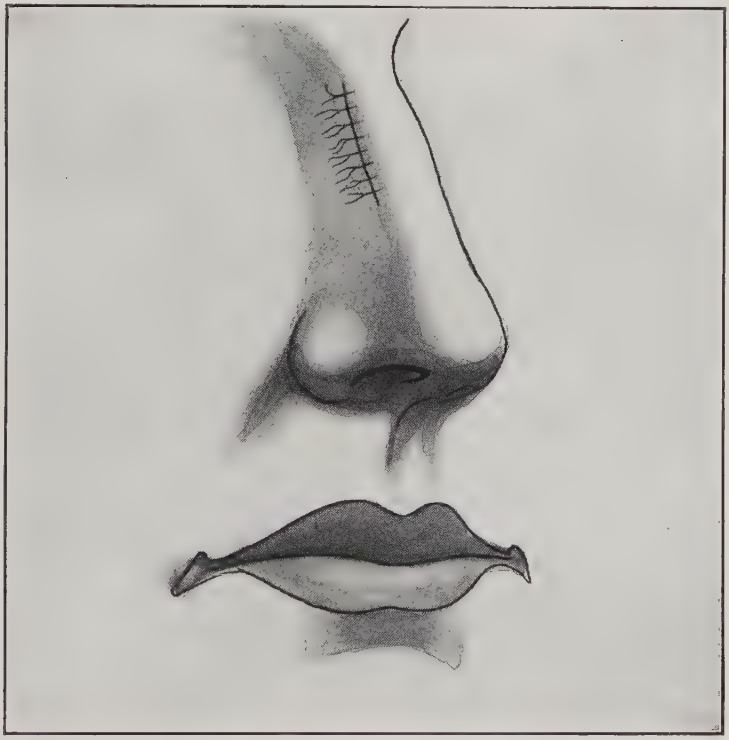

Fig. 99.—Illustrating skin closed after excision of hump.

equal care to secure an insignificant scar. Perhaps of all external operations, the spectacle bow incision is most easily hidden. Soft parts, when deadened, are cut to the bones and the tissues freed so that access to the hump is direct. This is then shaved away with

the gouge or chisel and the nasal bridge smoothed with great care. Bleeding points are pinched and twisted, and when all hemorrhage is perfectly con-

Fig. 100.—External incision in median line for removal of hump. The incision illustrated is unnecessarily long.

trolled and the operator has made sure that the bony tissues are freed from the slightest trace of irregularity, the soft parts are closed by sutures which very closely and exactly close the skin incision. These

sutures must be removed early. The aseptic technic should be absolute, the sutures must not be drawn overtight and the skin edges must make a perfect

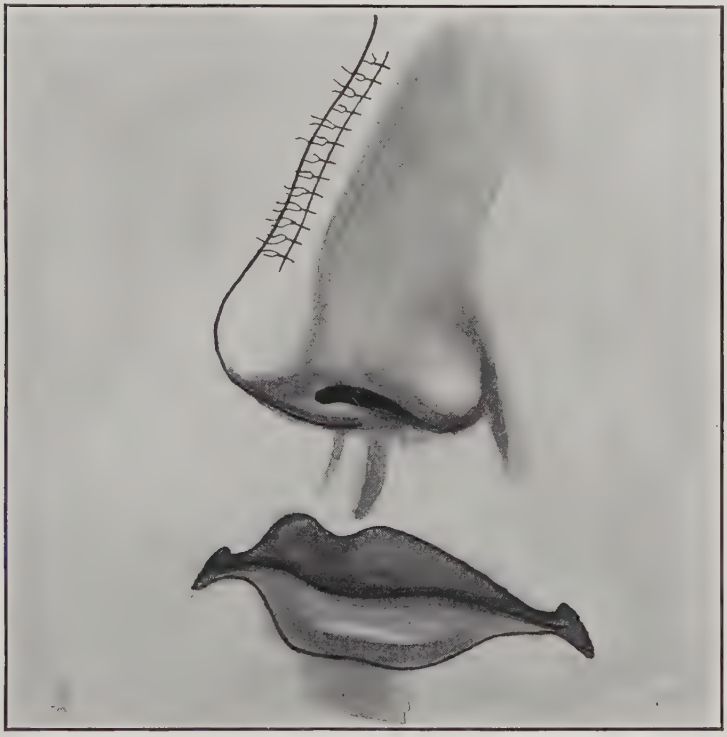

Fig. 101.—Manner of closing after excision of hump. Perfect smoothness of bone and cartilage are essential to a good result.

hairline contact. Plaster or collodion dressings may be used to reinforce sutures and by insuring immobility of the surrounding tissues may help to insure perfect union. The patient should remain quiet for

a few days, and avoid emotions which contort the features, so that no motion of the skin edges will draw lines of union apart.

Fig. 102.—The external incision of choice for removal of hump. High humps are reached through this incision with ease.

The Tip Tilted Nose.

This sometimes affects the appearance greatly, particularly when the alæ are thick and the tip blunt or bulbous.

Before operating the surgeon must decide whether or not bringing down the tip is all that is needed, or whether or not it will be necessary to reduce the bulk of the tip or alæ as well.

Fig. 103.—Skin closed.

Thorough infiltration permits an absolutely painless operation. The object of the operation is not only to loosen the tip and draw it down but to effectively anchor it in its lowered position.

The first step is to free the tip from the septum. This is best accomplished by passing a knife from above downward beneath the tip. This incision is made through one of the nasal orifices and should begin just below the free margin of the nasal bones, extend downward under the tip, and turn backward below the cartilaginous septum until it is close to the base of the philtrum. The tip is freed so that it comes down readily. In some cases the soft parts should be sectioned within the nose along the lower border of the nasal bones.

When the tip can be pressed into the desired lowered position without resistance of the soft parts, it should be held in this position, and sutures applied through the soft parts above and then through the cartilaginous septum at a lower point, so that the suture when tied holds the tip in the position desired by the operator. The exact point for passing the suture above and through the soft parts and the point on the cartilaginous septum depends upon the individual case. The bite of the suture in the soft parts should include an ample amount of the soft parts so that the suture will not cut through quickly, the stitch through the cartilage should be low enough so that the tip is held down as much as is desired without drawing the stitch tightly, for cutting of the stitch through the soft parts will allow the tip to return somewhat to its elevated position. The tend-

ency of all tissues of the face when thus loosened and held in an altered position is to return to the original position, and if sutures are tightly drawn cutting from pressure necrosis will allow this. More than one stitch may be used if the operator elects. The material easiest to handle is heavy braided silk. Silkworm-gut may also be used or twenty-day catgut. Of course, the twenty-day gut should be removed as it is not necessary when the parts are loosened well to attempt to hold them in the altered position for many days. If the operation is properly done sutures may be removed in five or six days and the parts will be found to stay in position.

The writer believes that operators will usually find it most convenient to do these operations upon the nasal tip with the patient recumbent. If the passages are packed on both sides with the chinosol saturated gauze the blood will be prevented from flowing into the pharynx and clots can be syringed away with the chinosol normal salt solution.

Celluloid or thin sheets of hard rubber heated in boiling water can be moulded into a splint which will fit accurately over the nose outside and hold the tip in the changed position. Plaster bandage can be used in the same way or a bit of cardboard soaked in the chinosol solution can be moulded into the shape of the nose. Any of these splints held in place by a close collodion dressing or by surgical plaster will

aid in immobilizing the tip and relieve tension on the sutures. While splints might do to hold the tip in the position desired, it is my opinion that sutures within the nose should also be used. Outside dressings should be so placed that the nasal passages may be syringed two or three times daily with the chinosol normal salt solution. Packings in the passages should, of course, be removed at the conclusion of the operation.

CHAPTER XX.

OPERATIONS ABOUT THE MOUTH.

Mouth proportions seldom harmonize entirely with the other features. A perfect mouth from an artistic standpoint is hard to find. The surgeon who would judge the type of mouth best suited for the individual face should study carefully artistic proportions. Photo studies of the patient are of considerable value for this purpose, and those on a large enough scale to allow easy measuring of the various features may help the surgeon a good deal in deciding just the type of mouth which will harmonize to the best advantage with other features. Of course to expect to take the patient with a mouth far from normal and give to such patient a mouth which meets all artistic standards is not to be expected of the surgeon, but should the surgeon know correct proportions he may better succeed in altering a mouth which deviates far from the standard.

Appearances, regarding the mouth, are frequently deceiving to the casual observer, the mouth which appears too large may merely have lips which evert too much, the thin compressed line-like mouth, may appear to have much greater faults than it really has,

and comparatively simple eversion operations may strikingly change its appearance.

Unlike the ears which are hidden in women, when not pleasing to their owners, and usually disregarded in men, and consequently not frequently called to the attention of the featural surgeon, the mouth is the subject of much concern, and operations to alter this part of the face will frequently be in demand.

The Everted Lip.

The everted lip often appears as the too thick lip to its possessor. Both lips everted make the mouth appear too large. Inversion of the lip may perfectly correct what is considered a too thick lip, and inversion of both lips may satisfactorily reduce the apparent size of the mouth.

Preparatory Steps to Oral Operations.

The mouth should be subjected to thorough cleansing with toothbrush and soap, several times daily for several days before operation At the time of operation mouth and teeth may be scrubbed with a dental soap and the mouth rinsed with chinosol solution.

The mucosa is rendered insensitive by infiltration.

Cuts in the mucosa are most conveniently made with small sharp scissors. The mucosa pinched into

a fold can be cut through quickly and accurately. It is not necessary to secure perfectly smooth edges to sutured wounds as in operations upon exposed surfaces. Sutures need not approximate with the per-

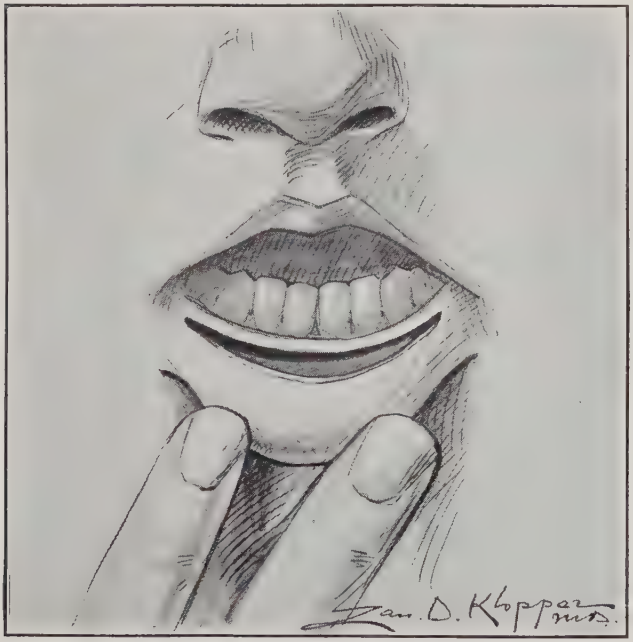

Fig. 104.—Type of excision of mucosa of lower lip for eversion.

fect exactitude demanded in successful operations on skin surfaces. The important feature of suturing is to secure good deep bites within the grasp of sutures so that they will not cut through before the healing has advanced far enough to insure successful union.

Braided silk is the best suture material. It should be fairly heavy. Bleeding is sharp when incisions are first made in the labial mucosa. This may be

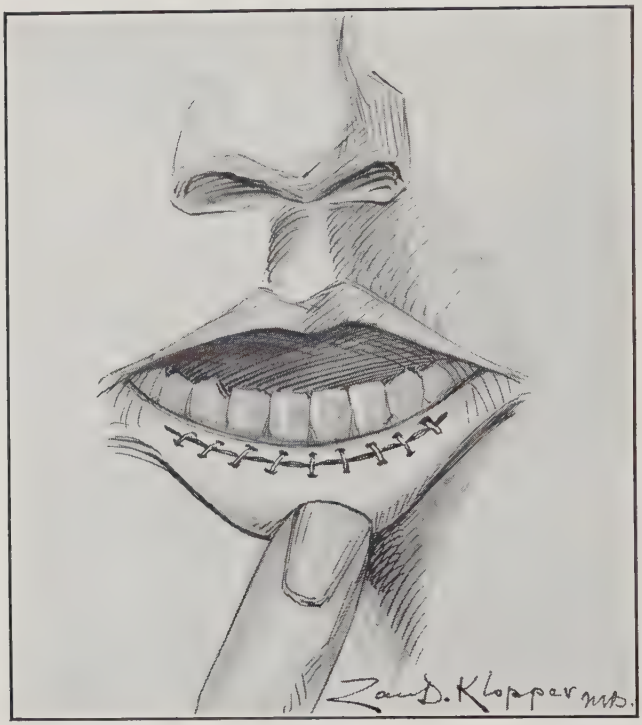

Fig. 105.—Manner of closing. Braided silk interrupted sutures probably allow most satisfactory closing.

checked by twisting bleeding points or by pinching such points with hemostatic forceps for a few minutes.

Perfect hemostasis is not as essential before closing wounds as it is in operations upon the exposed

skin, in fact the surgeon may even leave to his sutures the task of checking some of the oozing.

Stitches are left in four or five days. Stitches un-

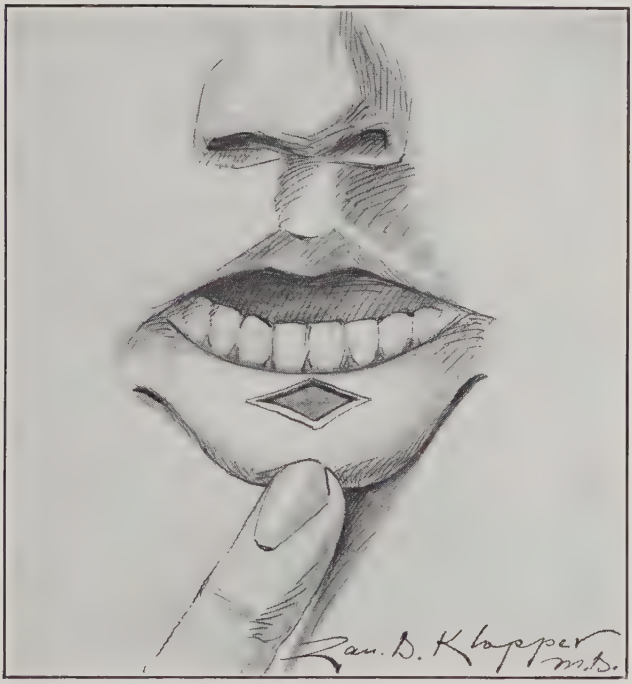

Fig. 106.—Where median line eversion is greatest this type of excision serves well.

der tension may cut somewhat and a line of union may be marked by quite a scar, but such scars out of sight within the oral cavity need cause no concern.

Mouth washes of an antiseptic nature should be used every two or three hours for several days after operation. Healing of the mucosa is usually rapid.

Sutures might be removed in three days without risking failure, but braided silk sutures cause no incon-

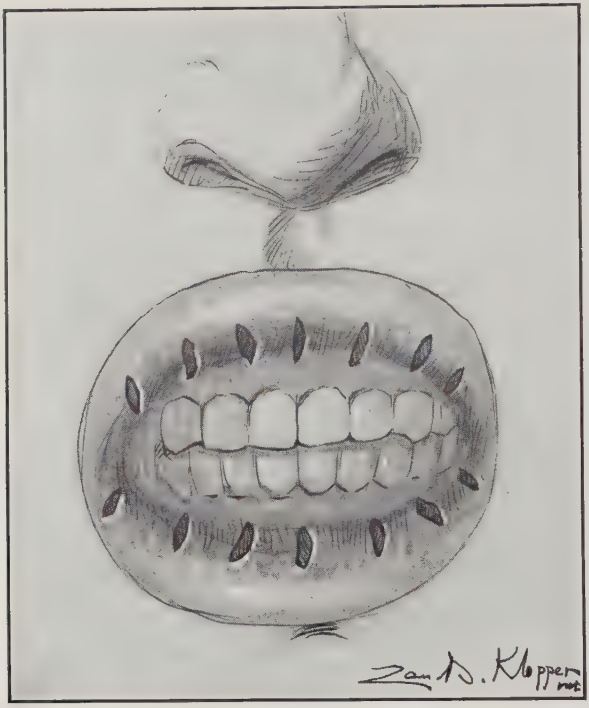

Fig. 107.—Illustrates method of inverting lip by multiple slits which are to be changed in direction by sutures.

venience and do no harm so that it is a more certain guarantee of success to leave them in longer.

Operations for Inverting the Everted Lip.

The simplest inversion operation is a single incision altered in direction for median line inversion.

In this operation an incision is made through the mucosa of the lip in the median line. The two ends of the incision are brought together by a suture.

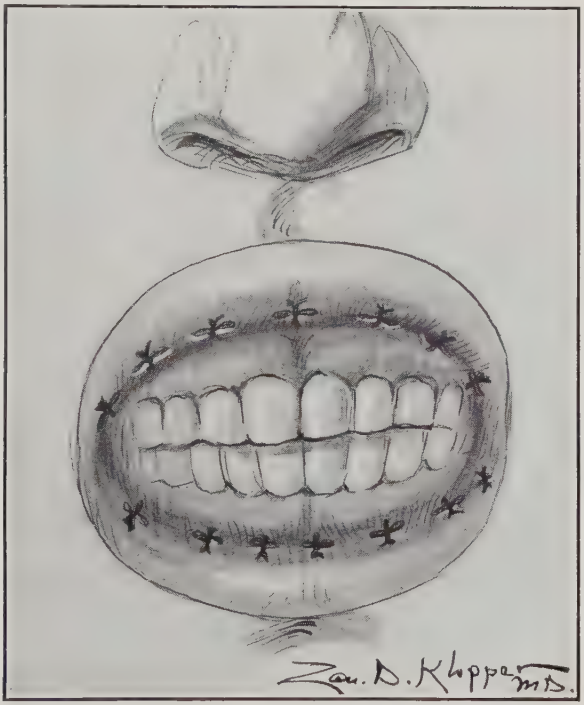

Fig. 108.—Operation completed by stitching multiple slits in direction opposite to direction when made.

When the angles are drawn together, and so held, the mucosa of the lip is drawn inward. Any gape on either side of this central stitch is closed by subsidiary stitches. Should the mucosa project too much on each side, forming a nipple-like tag, this may be

trimmed off and the raw edges of the wound margins brought together by sutures. This operation may be performed without the excision of any of the lip.

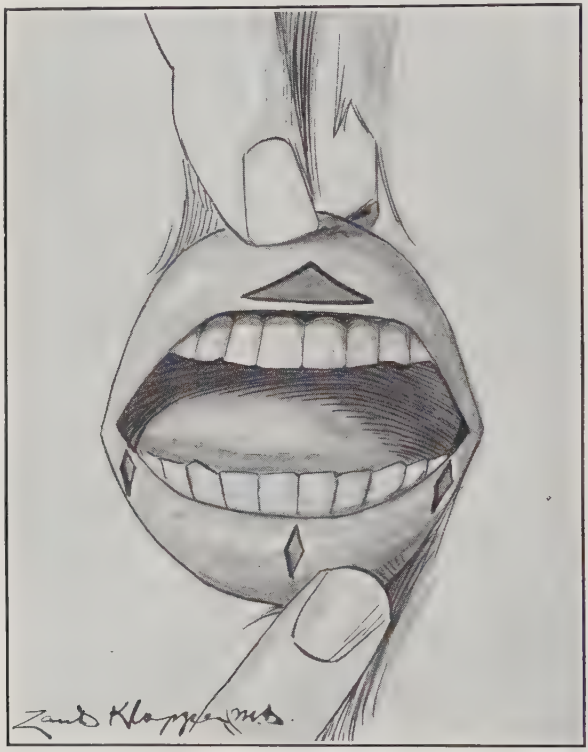

Fig. 109.—Combination of several plastic surgical principles in one case. This surgery allows the operator much discretion as to choice of methods.

A more radical effect may be possible if a lozenge of tissue is excised from the median line and the interval in the mucosa closed so that the free border of the lip is inverted. To secure an effect along a

greater length of lip a crescent of tissue from the mucosa either close to the free border of the lip or

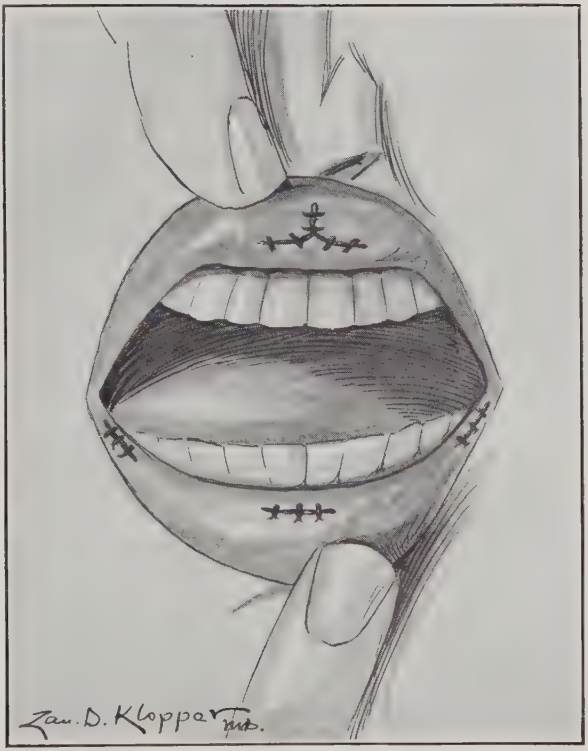

Fig. 110.—Illustrates the completed operation.

close to the gum. Such wounds when closed tend to draw in the everted lip.

A T-shaped excision may be used. This draws in tissues at the median line and also tends to draw tissues toward the median line. This operation sometimes alters a lip very satisfactorily.

Numerous short incisions at right angle to the lip altered in direction by sutures invert the entire lip.

A long strip of mucosa excised parallel to the free

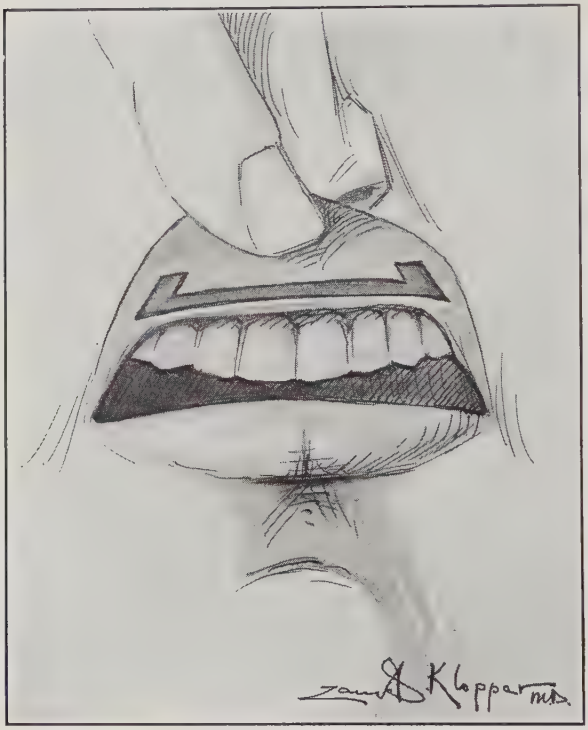

Fig. 111.—Excision of mucosa of upper lip to effect greater inversion at angles of mouth than along interval between.

margin of the lip and closed with sutures turns in the lip, usually the operation of choice to overcome the so-called 'double lip.'

To invert the upper lip a long strip within the mouth may be removed. This strip if wider at each

end draws in more at the angles of the mouth than in the median line, a desirable effect in certain cases. To determine just how much eversion is needed to secure the result desired temporary suturing of the

Fig. 112.—Operation completed.

mucosa may be practiced. Such sutures passed and tied quickly show just how much effect an excision will produce. Such sutures are then cut and withdrawn and the excision made.

In a few instances it will be found that lips are actually too thick. When there is a real excess of tissues such excess may be cut out, the surgeon excis-

ing a strip of the submucous tissues. After bleeding has been controlled by the usual methods, the interval in the mucosa of the lip is closed.

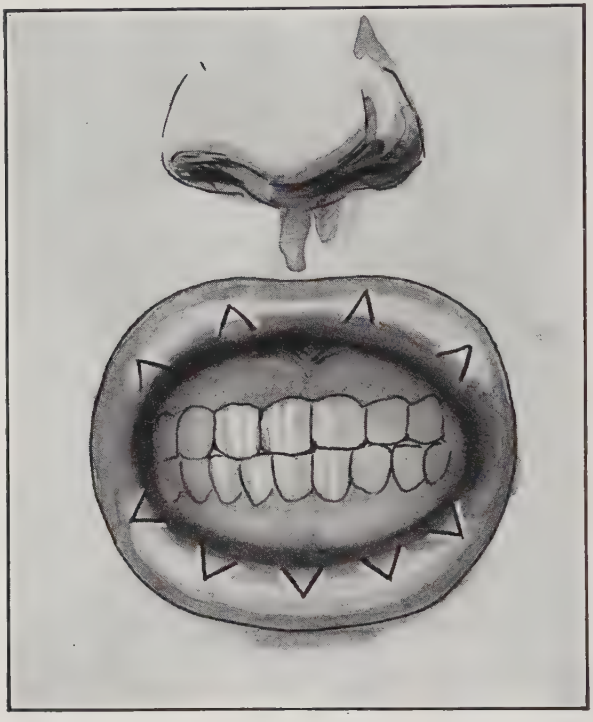

Fig. 113.—Method of using an angular incision.

In a few cases when the lip is excessively thick there will be an apparent excess of glandular cells beneath the mucosa. This tissue can be removed in the same way.

Excessive vascularity of the lip due to growths in which there are more than the usual number of blood-

vessels may require mattress sutures to control bleeding. Such sutures passed so as to compress all the divided tissues may at the same time be used to

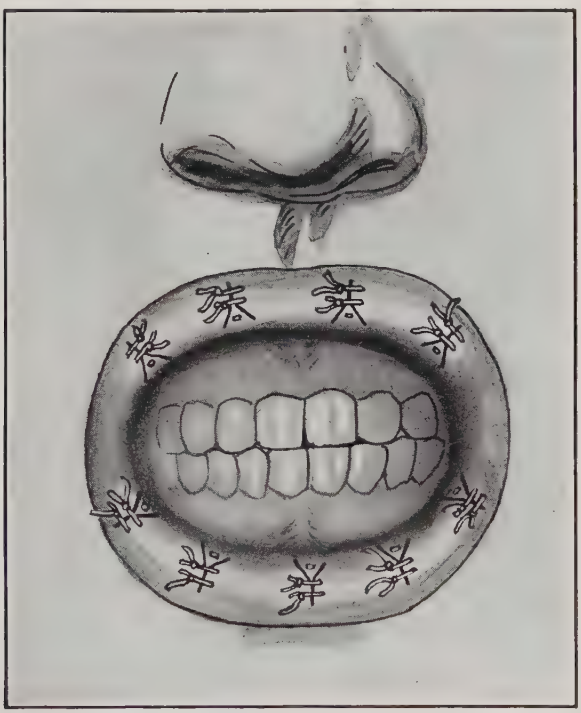

Fig. 114.—Angular incisions sutured to evert lips.

close the wound in the mucosa. These bleeding points so compressed by mattress sutures are effectually closed so that the bleeding will cease. In very vascular tissues mattress sutures can be passed so as to engage each other and all tissues effectually compressed.

The Inverted Lip.

The lip which appears too thin is frequently merely inverted. Alteration of such condition may be af-

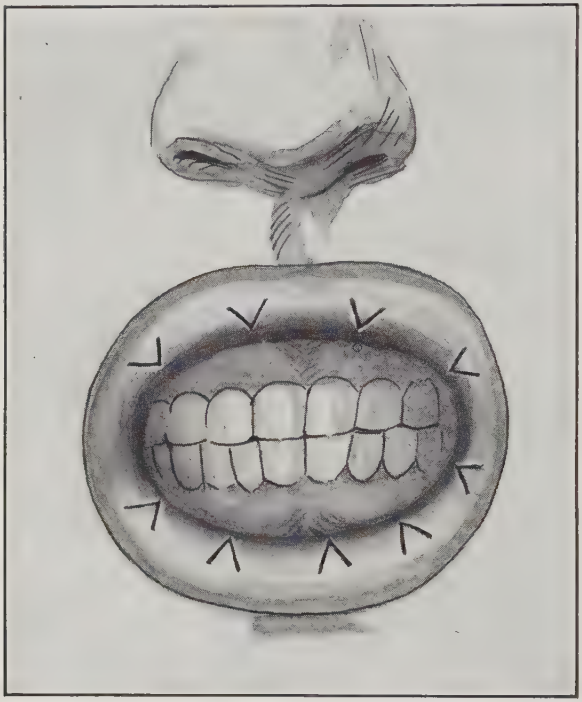

Fig. 115.—Reversing the angular incision, where near the border of the lips, may assure a more even eversion.

fected in two ways, either by an operation for everting the lip or by subcutaneous sectioning of the muscle fibers which invert the lip. The type of inversion due to overuse of the muscles about the mouth results from the habit of compressing the lips and in this

case sectioning of the muscle fibers of the orbicularis oris is indicated.

Single transverse incision converted into an incis-

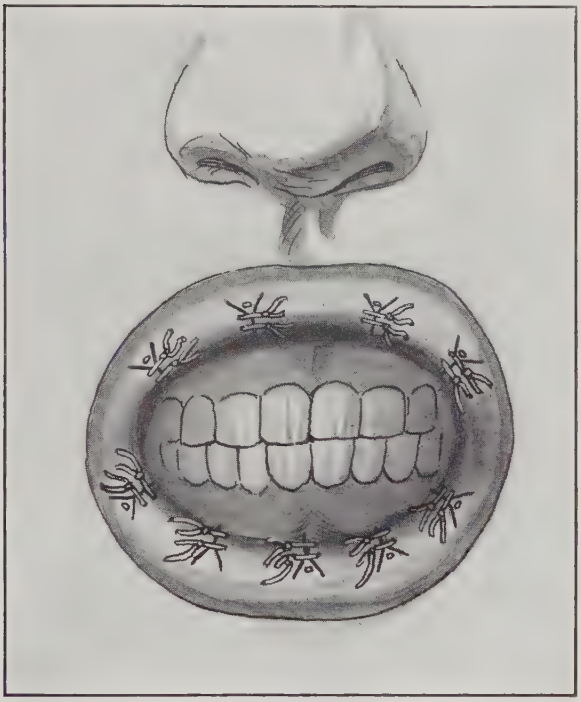

Fig. 116.—Operation completed.

ion in the median line of the face, by sutures, tends to evert the lip adjacent to the point of operation. Numerous short incisions made parallel to the lip margin and altered in direction by sutures evert the lip along its entire border. Multiple V incisions may also be used. Such incisions can be placed close to-

gether or an incision or two only used at selected points as the needs of the case indicate.

Eversion and inversion operations may be performed on the same patient with a view to altering the appearance of the lip to suit the needs of the case. In some cases the lip is everted to advantage in the median line and inverted near the angle. Frequently slight eversion near the angle of the mouth practiced upon the upper lip will attain just the effect desired to alter the appearance of the mouth.

The surgeon doing these various operations to alter the lip margins may desire to section the orbicularis oris and other muscles about the mouth at the same time. Subcutaneous sectionings should not be practiced from within. It is better to pass the tiny myotomy knife from the outside. Muscles of the face are close to the skin and intimately connected with the skin. For this reason the external puncture gives better access. The knife can be swept under the skin severing the tiny bands of muscle fibers to the best advantage.

CHAPTER XXI.

THE UNDULY LARGE MOUTH.

Sometimes the patient who has what appears to be a mouth of excessive size will prove to have upon

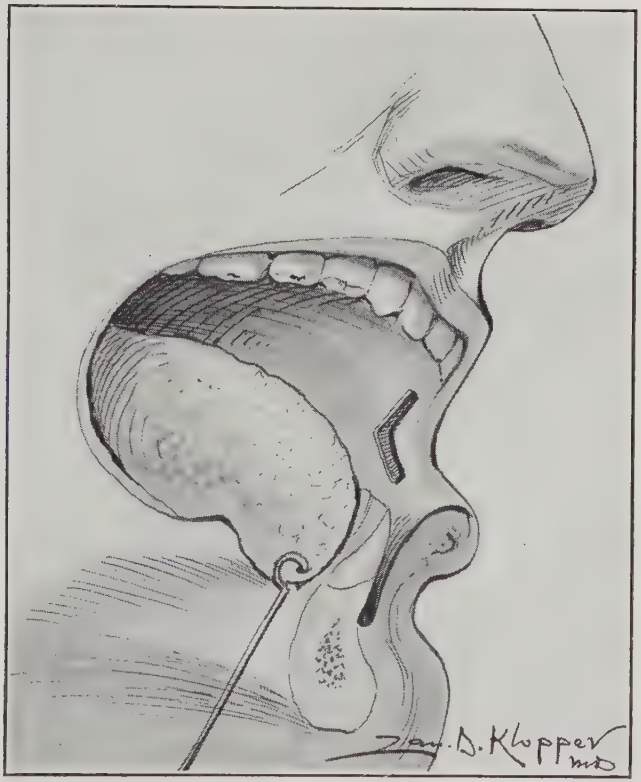

Fig. 117.—Incision for operation for advancing angle of the mouth.

closer examination a mouth in which the lips are everted too much or are actually too thick. Of course, the lessening of the interval between the

angles of the mouth would not give to such a patient a mouth which would be satisfactory; the undue eversion of the lips must be overcome or actual excess of labial tissues removed.

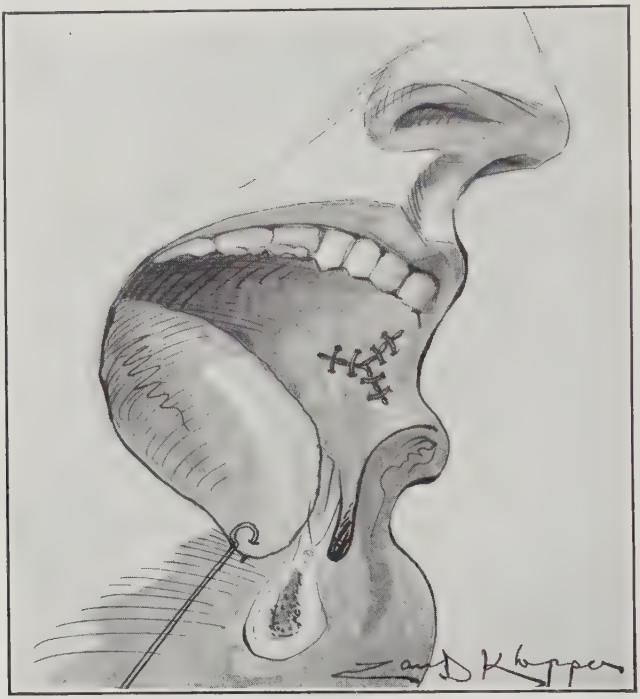

Fig. 118.—After loosening of tissues and advancement of angle of mouth toward median line, closure may be made as illustrated.

When the surgeon notes that the mouth which appears too large does so because of too thick or everted lips, the operations indicated are those to correct such conditions.

Several methods may be used to lessen the interval between the angles of the mouth. The angle may be advanced toward the median line by an operation which is largely subcutaneous. To do this operation,

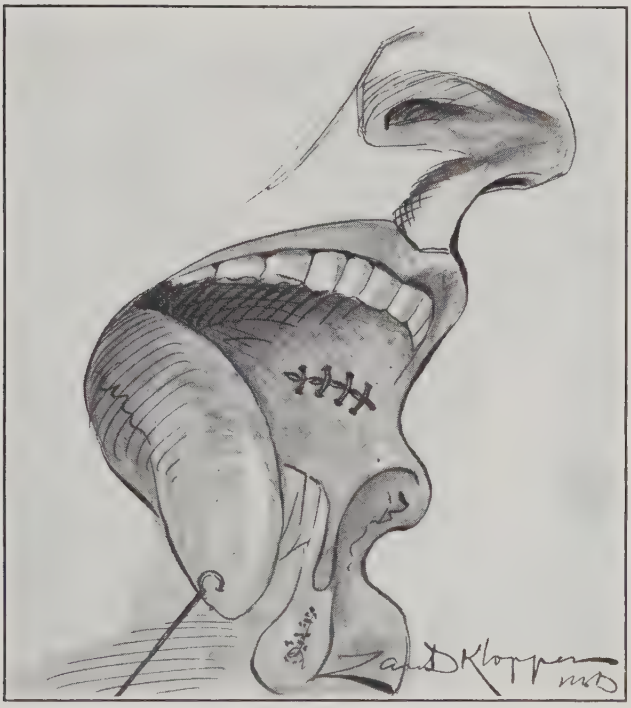

Fig. 119.—Method of closing to secure maximum effect. Sutures are passed deeply into tissues to immobilize until healing in the altered position has occurred.

an angular incision is made through the mucosa just within the muco-cutaneous juncture. This incision is used to gain access to the area just beneath the skin. These tissues are loosened, the angle of the

mouth is then drawn toward the median line of the face and sutures are passed from within so as to engage the thickness of the tissues between the

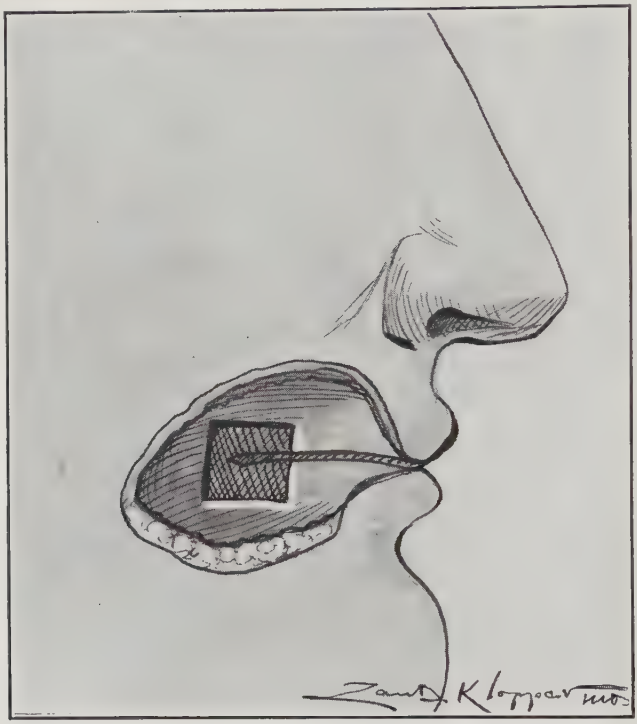

Fig. 120.—Manner of excising in operation for diminishing oral interval.

mucosa and the skin, the needle being carefully passed into the layers of the true skin, but not through the skin; the needle includes a semicircle of tissue emerging within. As the angle of the mouth has been drawn toward the median line and as the

labial tissues within the mouth have not been drawn forward toward this point, the angle of the mouth is advanced in this direction. Tying sutures firmly

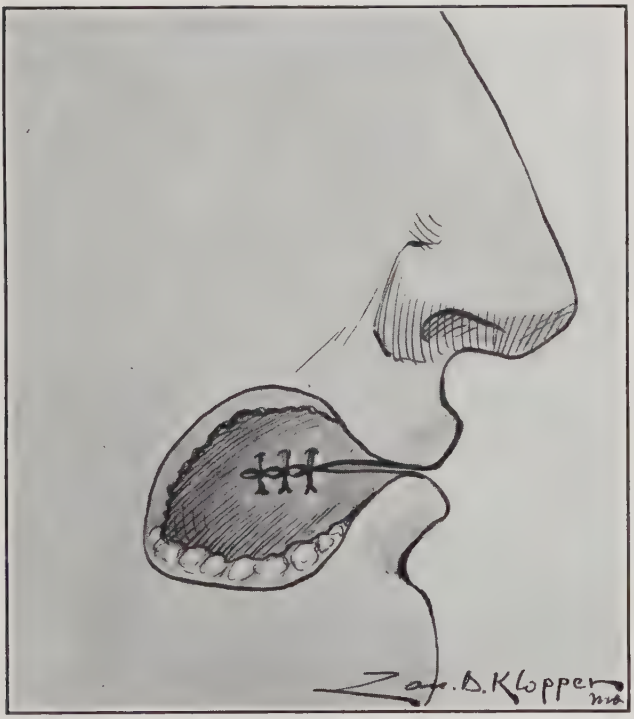

Fig. 121.—Manner of closing to reduce size of mouth.

enough to immobilize the skin included in the needle bite allows healing with the angle of the mouth advanced. The tying should be just firm enough to hold the tissues in the position desired but an undue tension should be avoided as the bite of the deeper

layers of the skin may cut out before union occurs. The angular incision in the mucosa can be closed so as to form a line parallel to the lip line or if this angular incision has been rather long, it may be closed so as to form a line of union shaped like the letter Y.

A second method of operation may be practiced by first splitting at the point of juncture of the skin of the lip and the mucosa so as to separate the skin and mucosa. The mucosa is now dissected free from areolar tissues upon which it rests and an area of denudation formed within the mouth. Sutures within the mouth are used to draw together the tissues so that the angle of the mouth is advanced toward the median line of the face. The skin at the angle is approximated by a fine silk or horsehair suture. After both operations for reducing the size of the mouth precautions must be taken to prevent yawning or wide opening of the mouth for any cause for a number of days.

The operations for reducing the size of the mouth can be used in conjunction with operations for inverting or actually reducing the size of the lips.

CHAPTER XXII.

THE EXTERNAL EAR.

The pinna or auricle, as the external ear is called, is made up of a framework of yellow elastic covered with integument. The organ is of slight functional importance, hearing not being perceptibly affected by its loss. Its size, outline and development are of pronounced importance from the standpoint of appearance, and a faulty ear, unless hidden, strikingly affects the appearance.

The free margin of the ear curves forward forming the helix. Near the highest point of the ear is a distinct tubercle on the margin of the helix which is known as the Darwinian tubercle and is said to be the analogue of the pointed tip seen in lower animals. When this point is well developed high upon the crest of the ear and there is an undeveloped wedge-shaped attached lobule, the animal characteristics of the organ are accented, sometimes materially affecting the cast of the features. In such cases resemblance to one of the lower animals may be unpleasantly suggested and surgical treatment of the organ, overcoming these characteristics, may influence greatly the impression created by the features.

Internal to the helix is a groove known as the fossa of the helix and internal to this is the eminence of the antihelix. The antihelix above divides, forming the fossa of the antihelix. The antihelix curves about a large concavity known as the concha, internal to which is the opening of the auditory canal. The anterior wall of the auditory canal is continued outward as a rather prominent projection known as the tragus, opposite to which is the less marked projecting antitragus. The interval between the two points is the incisura intertragus.

Below, the ear terminates as a soft pendant mass, varying in shape and degree of development and known as the lobule. This part is made up of fibroareolar tissue covered with skin. It contains no cartilage. While making up but a small part of the ear, the lobule plays an important part in influencing the impression created by the organ as to its beauty or lack of beauty. The lobule should be well formed, lobular, not wedge-shaped. The undeveloped lobule has been characterized as one of the stigmata by a widely read criminologist.

A very small amount of subcutaneous tissue intervenes between the skin and underlying cartilage. This tissue is practically devoid of fat. The arrangement of the vessels supplying the ear is such that the auricle receives a rich supply of blood from branches of the superficial temporal, occipital and

posterior auricular arteries. The manner of distribution of blood-vessels supplying the ear make possible a variety of plastic operations which might otherwise be impracticable. When infections are avoided healing is very satisfactory.

CHAPTER XXIII.

OPERATIONS FOR CORRECTION OF OUTSTANDING EARS.

These are the most frequently indicated of the operations upon the ears. Correction of outstanding

Fig. 122.—Illustrating operation for outstanding ears. By extensive excision of skin from back of ear and side of cranium the ear may be drawn closer to the side of the head.

ears will frequently alter the appearance of the ear in such manner as to obviate the need for other operations which seem to be indicated. Patients will

consult the surgeon with an idea that the ears need to be reduced in size or some other type of operation needed. Careful examination will show that by

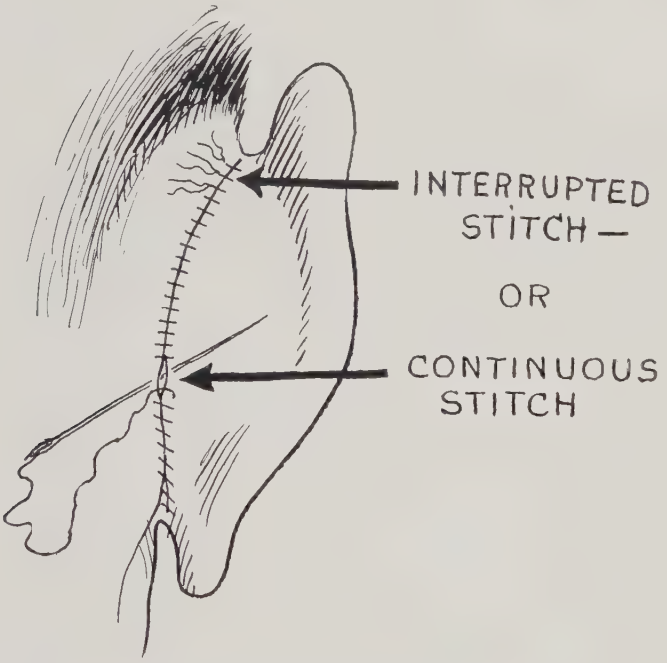

Fig. 123.—Illustrating methods of closing after excision of skin for overcoming outstanding ears.

placing the ear closer to the side of the head the appearance of the organ will be satisfactory.

Infiltration offers a simple and effective way of securing a painless field. The tissues involved in the operation should be thoroughly distended with cocain or procain, one-fourth of one per cent. in normal

salt solution. Distention of the tissues interferes but little with the operator.

The simplest operation includes the excision of a large ellipse of skin partly from the ear and partly

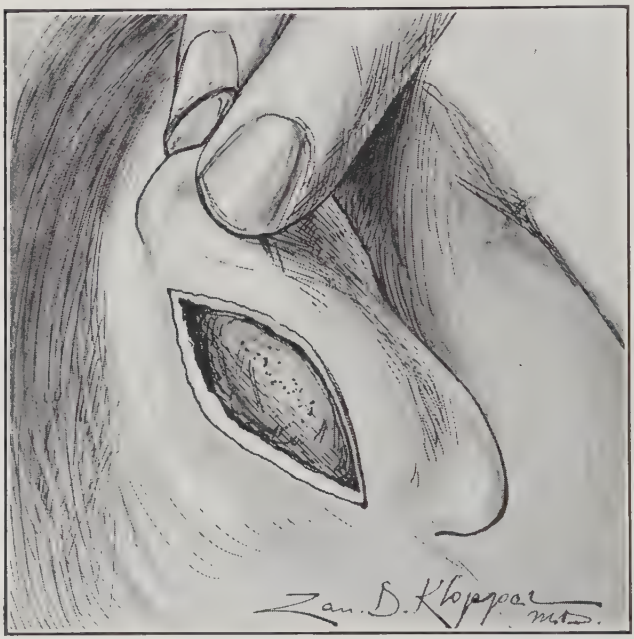

Fig. 124.—When free excision of skin is objectionable as in men the ear may be loosened through an incision at the juncture of ear and cranium posteriorly, a small amount of skin is removed and the ear stitched in altered position.

from the side of the cranium. This should extend along the entire posterior attachment of the ear. After outlining the area to be excised with iodin or with the point of the scalpel, the surgeon begins his

excision, the assistant following with a compression pad to control bleeding. As the skin is lifted the area exposed is quickly covered by the compression pad so that little bleeding follows. When the ellipse has

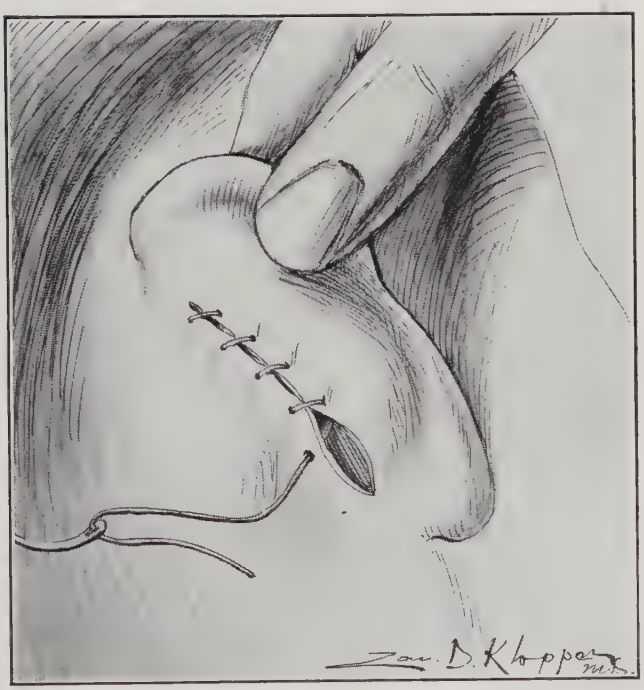

Fig. 125.—Method of closure. Completing operation.

been excised from one ear and the adjacent cranium, the operator turns to the other ear, infiltrates and excises a segment, the assistant following the excision with the compression pad as before. While the operator is working upon the second ear the exposed

area behind the ear first operated upon is subjected to continuous compression. When the operator turns to the first excised bleeding will have stopped from all except one or two points. These may be snapped and twisted as soon as exposed so that hardly any blood need be lost in an operation of this kind. In excising the skin from the ear it is easy to take enough of the cellular tissues as the surgeon follows the lines of separation which naturally develop when the skin is cut through. In excising from the cranium the loose cellular tissues should be included as much as is possible with the skin.

If there is much outstanding a wide area must be removed. In men this may cause the skin of the cranium to be attached far out toward the edge of the ear and produce an unnatural appearance when viewed from behind. The coil of hair extending down over the ear from above will hide such condition in women, so that the operation may be performed and sufficient skin removed to permit the surgeon to draw the ear as near to the side of the head as he desires. Testing alone will determine exactly how much skin must be removed and as there is considerable cartilaginous resistance in ears turned far out, the excision of skin must be considerable. By drawing the divided edges together the surgeon can see the effect he will secure. In men if it is seen that too much skin must be removed to

draw the skin in as much as is desired, the ear may be loosened from its attachments by undermining. This is best done with a blunt dissector as much as is possible. When the organ is loosened it may be turned back against the side of the head and held in place by sutures through the cartilage and then through the pericranium. To pass these sutures the short, strong, full-curved needles, such as are made for suturing the cervix uteri, serve very well. With a needle of this kind chromicized catgut sutures may be passed through the cartilage of the ear and through the pericranium. When tied these sutures will hold the ear closer to the side of the head. At least two such sutures should be used on each side. Should the operator desire to avoid buried sutures, the concha may be punctured by the needle and braided silk used to hold the cartilage in the corrected position. The suture should be passed so that it may be tied over a button in the concha. This suture over a button will hold the ear securely in place provided the firm fibrous tissues down to the cranium are included in the stitch.

When there is much curling in the cartilage causing outstanding in men, this curling may not be satisfactorily overcome unless the cartilage is sectioned. After the skin has been removed, the cartilage may be firmly and evenly divided. The operation may then be concluded by suturing the skin or the cartil-

age may be sutured to the pericranium, or in certain cases a segment of the cartilage of the ear may be excised. After excising a strip of cartilage it is usually well to suture the edges of the cartilage with chromicized catgut. Continuous or interrupted sutures may be used for closing the skin. As these sutures are under tension they should be of coarse, braided silk or catgut. If gut is used it should be chromicized and it should not be left to absorb but should be removed in about a week.

When the skin edges of the ellipse are evenly sutured the ear will be held at the angle desired by the operator provided the right amount of skin has been removed.

Whenever there is any tension on the sutures, either of the skin or those through the cartilage when such have been used, the operator should dress the ear against the side of the head. Strips of plaster may be used to hold the ear against the side of the head but the most effective dressing is the moulded plaster cast. This should be held solidly in place by several turns of plaster bandage about the head. Such dressing will insure immobility of the parts and also relieve most if not all of the tension on the sutures.

Formation of the Ear Lobe Surgically.

The ear occupies a position on the head which exposes it to various kinds of external trauma. Partial loss of the organ offers to the surgeon opportunities for the use of the remaining parts for the formation of a natural appearing organ. Each individual case presents its own problem. When the entire ear is lost the best advice to the patient is to secure an artificial organ if the loss cannot be hidden by the hair. The writer has never seen an ear formed from the soft parts adjacent to the auditory canal which looked at all like an ear, or in fact resembled anything slightly.

Sometimes women have a rudimentary lobule which may be improved by surgical treatment and which, showing through the hair, may produce the impression of a normal organ.

Sometimes the rudimentary fragment of the ear can be augmented by loosening the tissues from above and drawing them down so as to add to the size of a rudimentary lobule. Of course, such surgery must meet individual conditions, and the operator must be guided largely by these individual characteristics of the case.

CHAPTER XXIV.

THE EXCESSIVELY LARGE EAR.

In women large ears sometimes give an undesired masculinity of appearance. Reduction is not as easy as bringing the ear close to the side of the head. Outstanding ears in men may appear large and such patients may desire reduction in size, when reducing the angle of the ear to the cranium may give the result desired. By pressing the ear to the side of the head the surgeon can determine whether or not an operation for outstanding would be satisfactory. Ears too small in men do not improve the personal appearance, so that reduction, which at best is rather severe operative treatment of the organ, should not be performed without thought as to the actual effect. Sometimes ears vary in size and it may be possible to reduce the large ear to a proportion more nearly the same as the small ear. When the cartilages of one are closely curled, this condition may be largely overcome by surgery so that the appearance of the two ears may be made to more nearly correspond. Very rarely, the ear may be so attached to the head that its deviation from the normal is noticeable, in which case it may be loosened

and made to more nearly correspond to the usual type of ear. When the ear is loosened, it should be held away from the head, and if skin cannot be easily slipped into the gap, a small graft may be shaved from the arm and placed in the interval to hasten healing.

The simplest operation for reducing the size of the ear is to excise a wedge of tissue from the organ. Such wedge may have its base above and point downward, or it may be placed at any angle which the operator elects. A survey of the organ before excision will allow the operator to determine at just what angle the least abnormality of appearance will occur. When wedge-shaped excision has been determined as satisfactory, the wedge should be marked off as elected by the surgeon, the skin cut through and pushed back slightly from the cartilage. The same technic should be followed behind. Then the cartilage should be smoothly excised. All hemorrhage should be controlled and the cartilage then brought together with fine chromic gut. In cutting through the cartilage the edge may be made so that the cartilage will overlap, one edge upon the other. Such technic may add steadiness to the union before healing occurs. When the cartilage is cut through without this overlapping effect being produced, if the sutures are carefully placed and tied with the right degree of firmness slipping is very unlikely to

occur. The sutures closing the gap in the cartilage should bear all tension, the skin should be closed with fine silk, preferably using the interrupted stitch so as to insure the most exact union without irregular tension.

CHAPTER XXV.

MICROTIA.

Both ears may be unduly small and imperfectly developed but usually the condition is seen on one side only. There may be auricular appendages or a second imperfect ear in the neighborhood. A curled and twisted organ is sometimes seen. The latter offers the best chance for the cosmetic surgeon, as it is not really as difficult as it seems to unroll the curled-up organ, but to make a big ear out of a little ear is certainly a task which to say the least is unpromising. The curled-up ear may be straightened. Careful surgery may demand that the work be done in stages, but inasmuch as the operations can all be done with local analgesia this is little against such a course. Making a big ear from a truly microtic ear, one which may be but a small mass of tissue, is a task for the surgeon who wants it. The writer is inclined to suggest to these patients that the deformed tag which euphemistically may be called an ear should be cut away and an artificial member purchased. Of course, surgery may be demanded here for the purpose of opening an occluded auditory canal. A few x-ray views help the surgeon in such operations, provided he has a radiologist who can

interpret intelligently. Infants are usually the subjects presented with the occluded canals and restoration of the passageway is not as easy as it looks. Merely opening a passage does little good. Keeping the passageway patulous with a plug is seldom a solution of the difficulty. The walls do not epithelize, the plug may be left in for weeks but when removed the passage fills with granulations.

Flaps of skin must be used to form a canal. They cannot be too much detached. Here the rudimentary blob, which has been called an ear because it is where the ear should be, can be used to furnish necessary skin flaps. After the canal has been made patulous, remains of the so-called rudimentary ear may be extirpated to make way for an artificial member.

Amputation of the Auricle.

This is recommended for badly deformed, microtic ears and for malignant disease. Lupus may sometimes destroy so much of the ear that the remains of the organ are best removed. The cosmetic surgeon should carefully preserve sufficient skin flaps to allow covering of raw surfaces, and an effort should be made to place lines of closure where they will be least conspicuous or most easily hidden.

Wounds of the Auricle.

Wounded auricles are common. When carelessly treated a perichondritis may occur, resulting in a marred and disfigured auricle. Open wounds should be carefully sterilized, foreign matter removed, and wet dressings of chinosol normal salt solution applied. Gaping cutaneous areas should be closed with horsehair. Drainage, when necessary, should be posteriorly if possible. When the cartilage is torn or cut through it is always possible to drain from behind; in fact, if the injury is such as to demand drainage the skin should be punctured and the drain brought out behind rather than risk an unsightly scar by anterior drainage.

Through-and-through sutures should not be used in closing a lacerated auricle. Sutures should be placed from behind in suturing the cartilage, the sutures going through the skin posteriorly and the cartilage not the anterior skin. This should be carefully closed by fine horsehair. These stitches should be removed within three days so that stitch marks will not be left. Such sutures should be placed without tension. The attachment of the ear to the body is firm, the weight of the body being insufficient to detach an ear, so one learns by a perusal of authorities in anatomy. Partial detachment is common. When sutured in place and an efficient antiseptic dressing

used, ears usually heal quickly in place. Completely detached ears replaced and sutured and kept dressing in warm normal salt solution have been known to become reattached, so medical literature reveals. Warm wet dressings with no attempt to change the dressings for a week or ten days are recommended. If the ear is found black and shrivelled it should not be cut away. Leave it until it literally falls off, continuing warm wet dressings no matter how unpromising it appears so long as it stays in place. Mass grafts in the writer's experience practically all look like failures a few days after operation. By leaving them in place and continuing the dressings it will be found that apparently hopeless grafts take.

Lupus Vulgaris.

Scars left by lupus ulcerations are more frequently seen than active ulcerating processes. Lupus usually begins with a dry, indolent nodule; several form; becoming itchy the patient scratches or picks them, the surface skin gives way to expose an ill-defined erosion; this gradually deepens until a well-defined ulceration exists. Lupus attacking cartilage causes rapid destruction of tissue, but in the skin alone, as on the cheek, the ulcerations which heal without secondary infection leave scars that are not at all bad looking. The surgeon should insist that care be used to keep ulcerations dressed with antiseptics

which prevent secondary infections. Treatment for lupus has come to be confined largely to the use of radium or x-ray. Having a supply of the former, the writer is in the habit of using it in preference to the x-ray.

Scars left by lupus can be treated surgically with impunity. The process is unlikely to recur in an area which has fully healed. Excision often greatly improves the appearance. It is not necessary to excise the entire area left by lupus ulcerations. The more unsightly portions of a lupus scar may be excised and approximation of scar tissue to scar tissue remaining heals perfectly provided antiseptic precautions are taken.

CHAPTER XXVI.

CRESCENT-SHAPED EXCISIONS FROM THE EXTERNAL EAR.

This plan of operation usually consists in removing a crescent of tissue from the concha with a small part

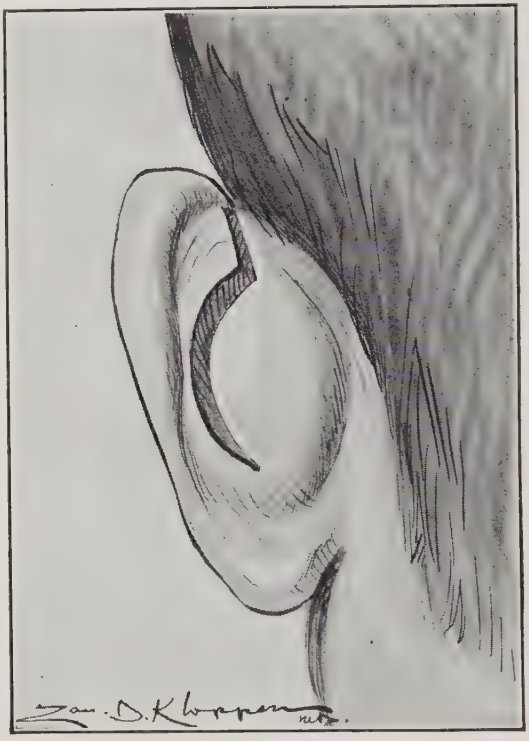

Fig. 126.—A method of reducing size of the ear.

of the helix and antihelix, the object of the operation being to place the line of union as much in the shadow as is possible. The part of the helix to be excised should be carefully chosen so that the scar-

line across this prominent aural landmark be as inconspicuous as possible. The portion of the helix removed may be from above close to the attachment

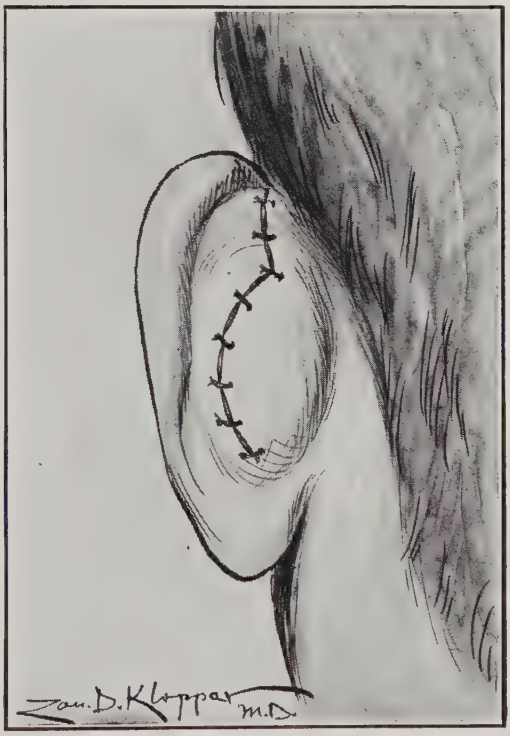

Fig. 127.—Method of closing after excision of tissues.

of the cranium, from below, or from any intermediate point. Inconspicuousness of scar lines is really secondary in importance to the symmetry of outline, so that before operating the surgeon must study carefully the effect of the operation. More than one

surgeon intent in hiding scars, controlling hemorrhage or other secondary matters has failed to note the actual effect of his excisions until too late and

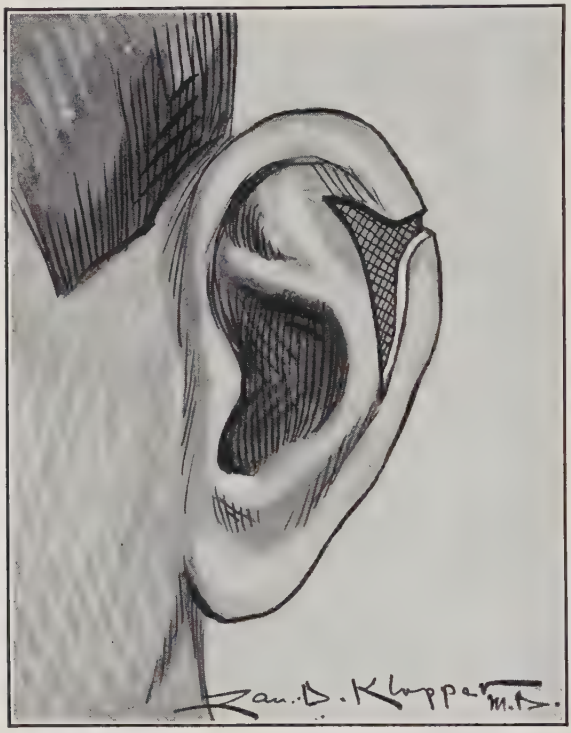

Fig. 128.—Another type of excision of portion of ear.

parts have been sacrificed which might better have been saved. The plastic surgeon now and again during his operations should stand off and study effects just as does the artist when painting a picture. Shape, size and extent of excisions in altering the

external ear are a matter of judgment in each individual case. Tissues should be infiltrated so that when divided they are absolutely insensitive to pain.

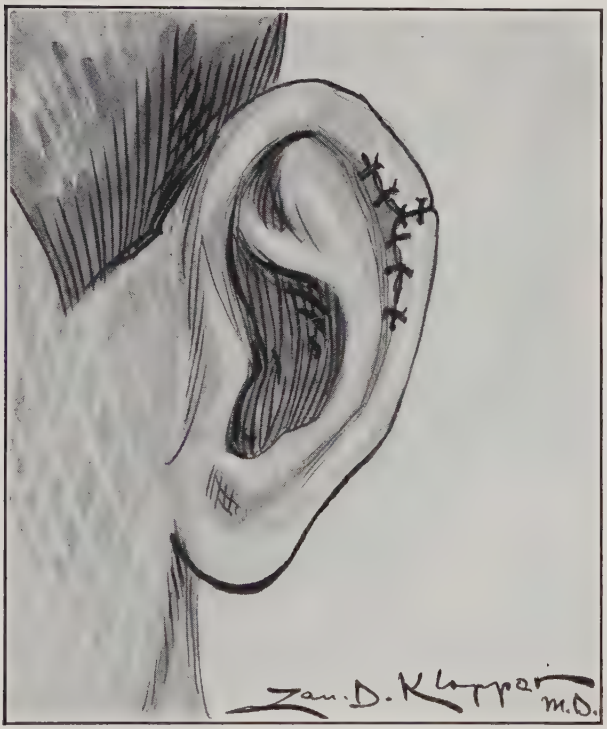

Fig. 129.—Method of closing after excision of portion of ear.

Unless well experienced, the surgeon should mark off lines to be followed during the excision. The skin should be cut and loosened from the cartilage before the cartilage is cut through. Skin incisions should be evenly made so that accurate approxima-

tion is possible subsequently. Small projections of skin, or irregularities in the cartilage will show years after operation. The immediate appearance at the

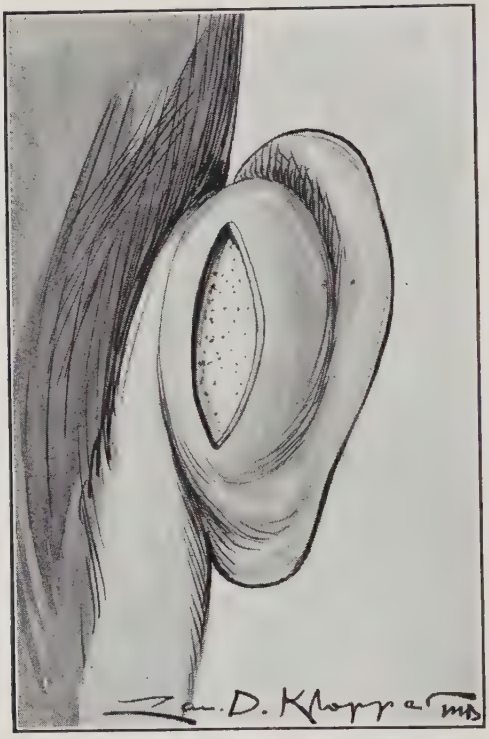

Fig. 130.—Skin incision down to cartilage where sectioning of cartilage is indicated.

conclusion of the operation should be neat and workman-like, for time will not improve a botchy looking result. Slanting incisions through the skin and also through the cartilage may allow overlapping of these

parts as has been mentioned in previous descriptions. Some surgeons are strongly in favor of overlapping methods for securing approximations to leave mini-

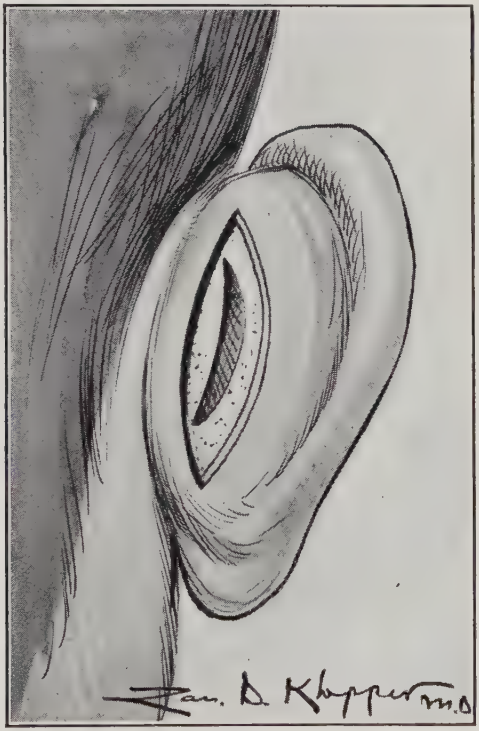

Fig. 131.—A segment of cartilage excised.

mum after-effects. Such technic does not prevent poor results from imperfect approximations. Skin along the cartilage should be redundant, but only to the slightest degree. All tension on the skin edges is thus avoided but much excess may leave a ridge

along the line of union, a more or less objectionable result.

Surgeons in the past describing these operations

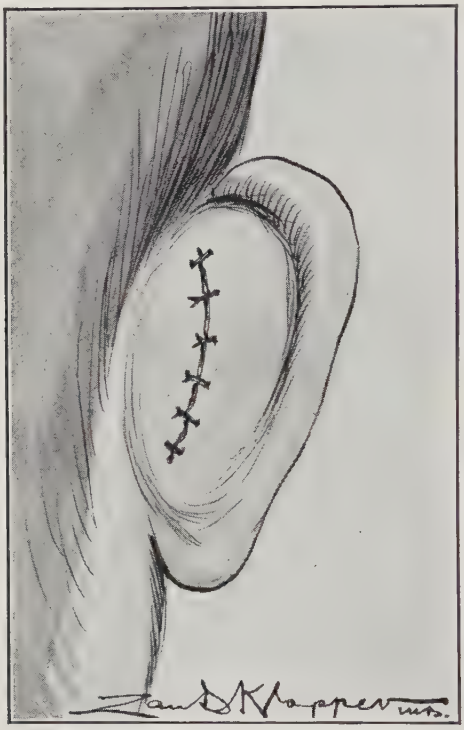

Fig. 132.—Operation completed by sutures through skin and cartilage.

have illustrated excisions along the prominent antihelix. There is hardly an ear which would not be conspicuously deformed by such operation. Excisions should be in the shadows, and with a little care lines of union so situated will be inconspicuous. Il-

lustrations on normal organs serve poorly to typify methods for abnormally developed organs. Sometimes excisions can best be accomplished by the removal of tissues from the posterior surface, carefully refraining from removing portions of the anterior part of the ear which are conspicuous. If skin is so preserved it should be loosened so that it will not form a prominent ridge, but may retract and flatten more or less.

The surgeon in these operations selects the type of excision which he believes will most successfully reduce the organ. He works from behind, excising all tissues except the skin on the exposed surface, the closing the wound after all hemorrhage has been controlled. The ear is dressed close to the head, using by preference the plaster dressing described.

CHAPTER XXVII.

THE PLASTER CAST FOR IMMOBILIZING THE EAR AFTER OPERATION OR INJURY.

The plaster-of-Paris cast forms the ideal dressing for immobilizing the ear after operations or injury. It is made with sterilized plaster-of-Paris and plaster-of-Paris bandages. Bandages of doubtful sterility should not be used unless baked in an oven. This dries out the plaster and insures quick and complete setting. The bandages should be soaked in freshly boiled water before applying.

The hair is first enveloped in gauze dampened in chinosol normal salt solution. Any irregularities in the gauze are then removed with sharp scissors so that the gauze lies smoothly over the organ. The plaster bandage is then carried back and forth behind the ear until this space is filled, the bandage being carefully moulded to conform to any of the natural irregularities of the ear. The plaster bandage is then carried back and forth until the ear is completely surrounded by a firm pad of plaster. A single layer of gauze saturated in sterile petrolatum is now spread over the organ and plaster bandage layers formed so that the ear is covered. The wet bandage can be gently pressed into

the irregularities of the ear. As a final step the plaster bandage is carried about the head a number of times so that the organ is buried in a plas-

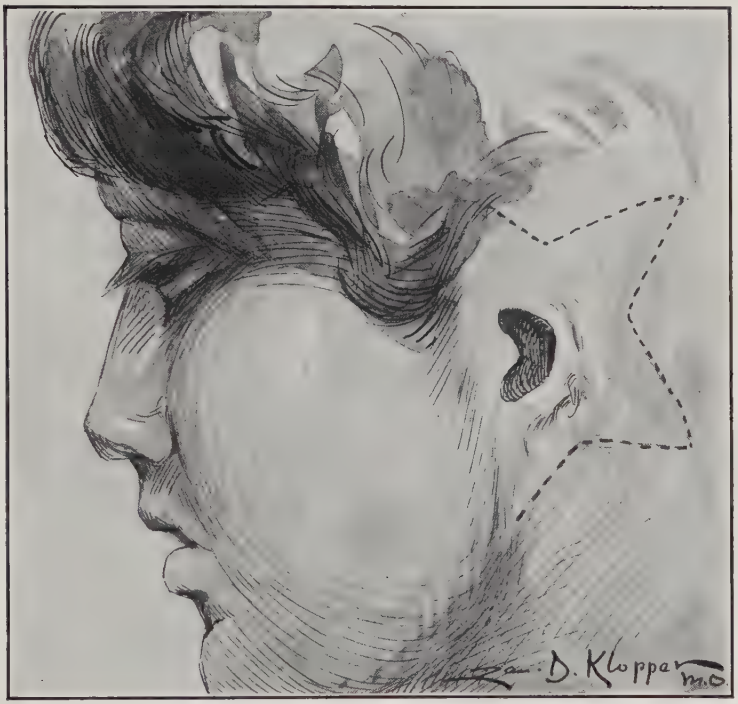

Fig. 133.—Lines followed in loosening soft parts for forming auricle. The writer has never seen an auricle formed from such soft parts which really resembled an auricle.

ter dressing, which is steadied by a firm plaster band about the cranium. If the operator desires, the turns about the head may be separated from the cast moulded over the ear by paraffined gauze. This dressing insures absolute immobility of the organ in

the position chosen by the surgeon. No ordinary contact with the dressings will disturb parts injured or operated upon. While precautions as to asepsis should be extreme, with a view to leaving the organ undisturbed for a week or more, the band about the head and the overlying cover to the ear may be removed without disturbing the ear so that the parts may be inspected if the surgeon desires.

Reconstruction of the Ear.

In the first and second editions of this book the operative technic for reconstruction of the ear was described. There was also a photographic illustration of one case where the writer had secured what was considered a truly excellent result. Descriptions of this operation are omitted from this edition and the writer suggests that operators interested in such operations look up descriptions in detail in the larger systems of general surgery. The ear which is made from adjacent or transplanted soft parts is seldom presentable and in most instances the effect in no way repays the effort. The average person will find the artificial ear much more satisfactory and when cleverly made it is hard to distinguish it from the natural organ.

Grossly deformed faces may be the subject of individual operations. Such surgery belongs to a different field from that considered in this book.

CHAPTER XXVIII.

ADHERENT AND UNDEVELOPED EAR LOBULE.

There may be without the pointed tip to the ear an adherent and undeveloped lobule. This may have a good deal of effect upon the appearance and the lobule may be detached and reformed by the surgeon. When he does so he may take more or less of the skin and soft parts from the side of the face and so close the interval left by sutures that a line of union is formed in the shadow of the lobule. At the same time by careful planning, lines of union on the lobule may be so formed that the lobule itself shadows these.

Effects from so slight an operation may seem of doubtful importance but in certain cases this is not true, for this type of change may have a good deal to do with softening the impression created by a deficient lobule.

Of course, in most cases, operations for reforming the lobule or altering its size or shape are indicated in connection with other operations. To overcome a certain cast of features it may be necessary to operate upon the ears, eyes, nose and mouth. Of course, it is a gross exaggeration to lead gullible patients to believe that the surgeon can model the features as

the sculptor can clay, but he can at least do more or less in patients to change undesirable featural effects. There is no denying that the most striking thing which the trained featural surgeon may do is to

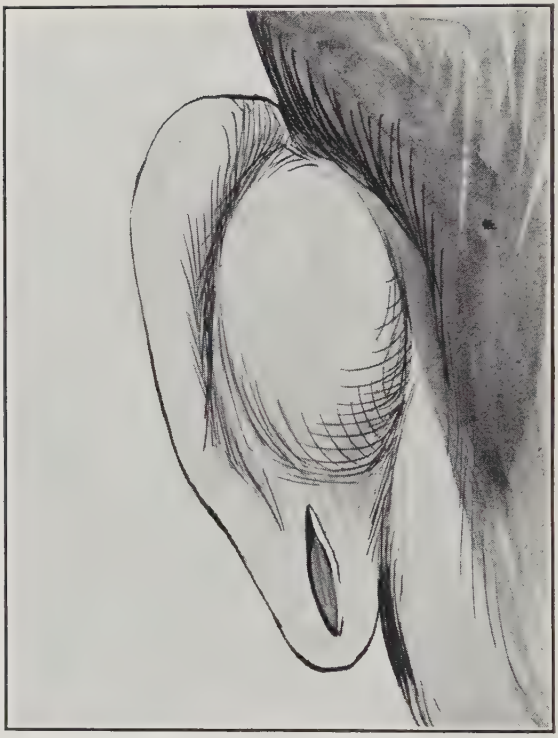

Fig. 134.—Preliminary incision for shortening lobule.

eradicate the effects of age upon the features, provided the patient is willing to put up with more or less scarring. If too much is not demanded these scar lines can be hidden in the hair and in the shadow of the eyelashes.

Reduction in Size of the Lobule.

It is not particularly unusual to see a large lobule, one so conspicuously out of proportion as to affect

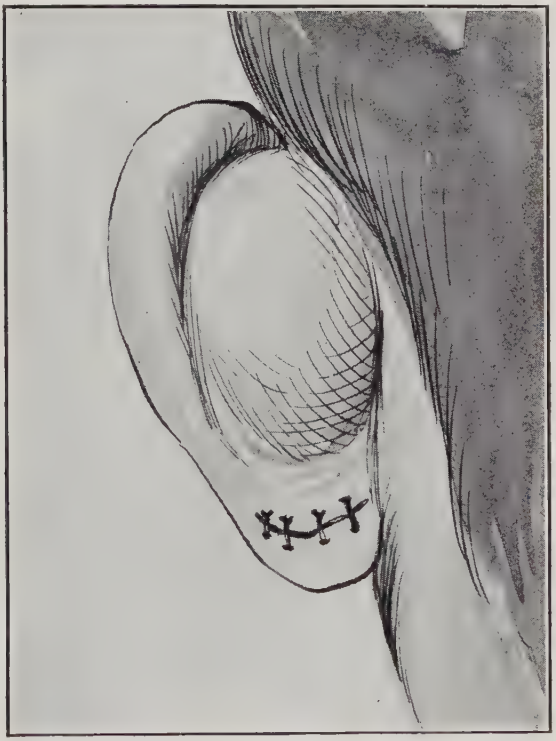

Fig. 135.—Method of closing to shorten lobule.

the entire appearance, to be in fact the outstanding characteristic of the man. Such a lobule should be reduced in size. There are several ways in which operations of this kind may be performed.

If the lobule is too long and not excessively bulky it may be shortened without the removal of much or even any tissue. To do such operation an incision is

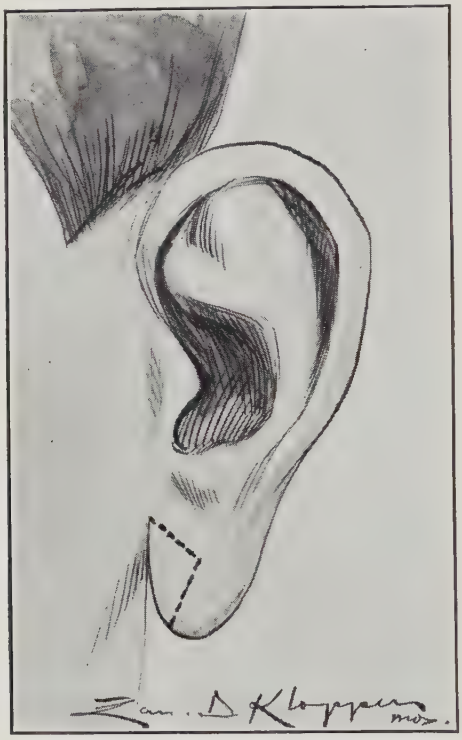

Fig. 136.—Line of excision of portion of lobule.

made behind along the middle of the lobule. This perpendicular incision will give access to the soft parts making up the body of the lobule. A narrow, even strip should be removed if it is desired to actually reduce the size of the part. This should be more

or less crescentic and taken from across the lobule. It produces more or less of a cavity, but this is easily closed by the sutures used in completing the operation.

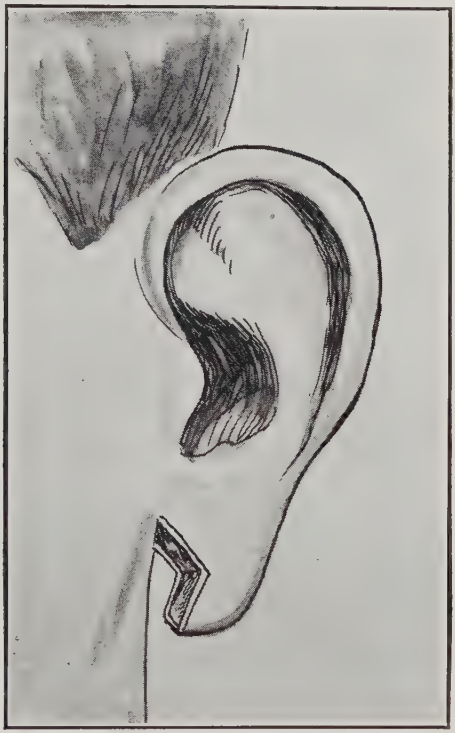

Fig. 137.—A portion of lobule excised.

When much tissue is to be removed from the lobule of excessive size care should be taken to remove this in even regular strips, as a chunk cut from the lobule will give it an unnatural irregularity which will be far from pleasing.

The incision for reducing the size of the lobule should be fairly free so as to give good access to the tissues to be excised. To attempt to remove a chunk

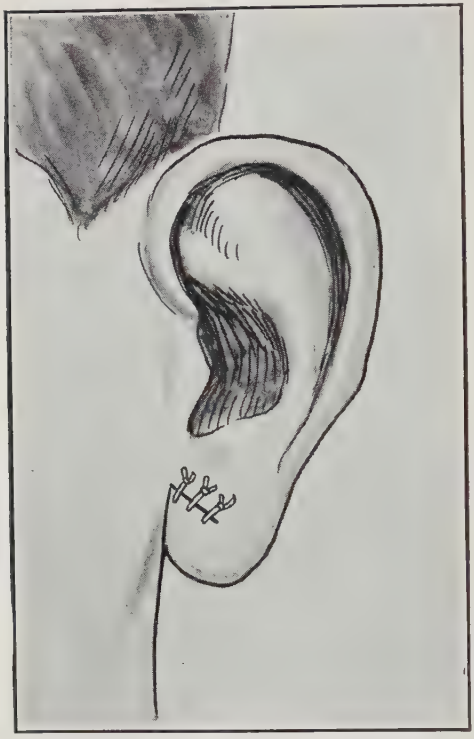

Fig. 138.—Method of closing.

through a very small incision is of no advantage and the likelihood of getting a perfect result is very much lessened.

When the lobule is incised, bleeding may be free but it can be controlled easily by pressure while the

dissection is being made for the removal of excess tissues. When the operator has removed all he desires he should control all bleeding points before suturing. Sutures should be passed well into the tissues of the lobule and the pendulous tip elevated. This may better be accomplished by changing the direction of the external wound so that the perpendicular line is changed by the sutures to one extending transversely across the back of the lobule.

Portions of the lobule may be cut away and the lobule turned upward so that the excised interval is closed.

This operation may be done in such manner that little external scarring is produced.

In both of these operations fairly strong procain solutions may be used to produce analgesia. In this way the normal relations of the part are less disturbed. If a two or four per cent. solution be injected into the lobule only a few drops will be needed to produce insensitiveness provided the operator wait a few moments after injection.

In amputating a segment of the lobule the amount to be removed should be carefully measured before operation. It may be well to mark out with iodin or other coloring the exact size and shape of the segment to be excised.

CHAPTER XXIX.

THE ATTACHED LOBULE AND THE POINTED EAR.

Strange to say, men who have this type of ear often little suspect how it influences their appear-

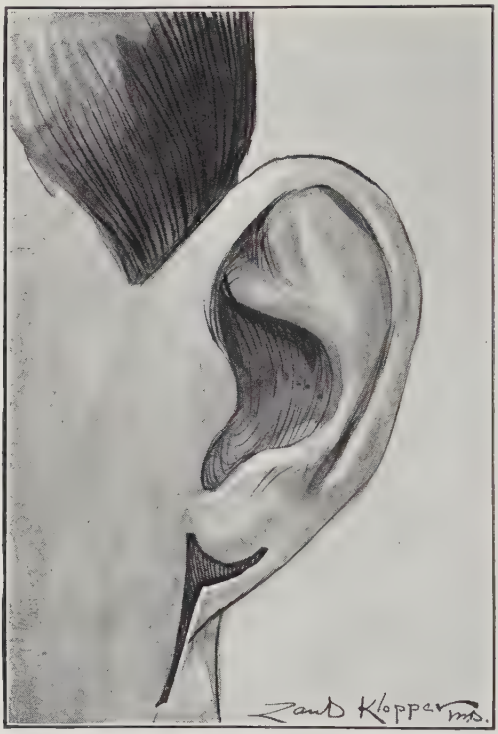

Fig. 139.—Operation for attached lobule. The lobule detached from side of head.

ance. Such patients may have no idea that this condition creates an expression of which they would be rid, and they seek the featural surgeon to have the nose or eyes changed attributing to either of the

parts the responsibility for their expression. When the surgeon notes such an ear he can safely advise its alteration, as the effects are necessarily considerable in men.

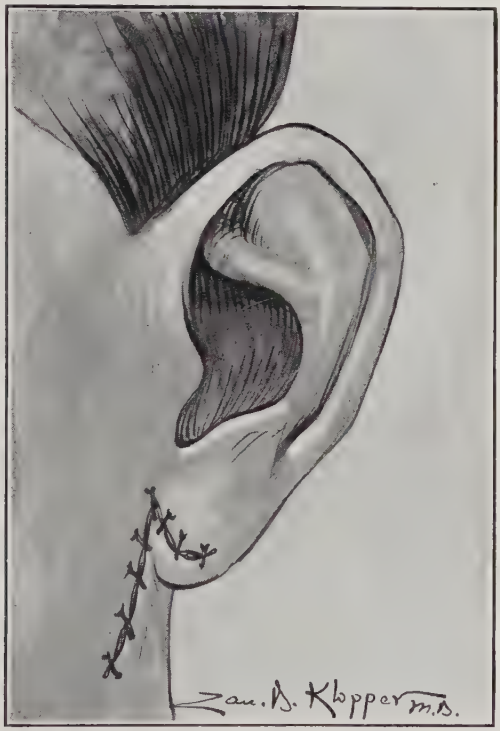

Fig. 140.—Operation completed. Lines of union should be placed posteriorly so as to be shaded by the lobule.

The pointed ear effect may not be actually due to a point on the superior margin so much as to a fulness here and a deficiency adjacent. Operation to overcome this effect is not particularly difficult. The

so-called Darwinian tubercle in this situation may be excised with a small amount of the helix, or in some cases an excision may be made from behind which does not actually involve the circumference of the ear. In this way scarring on the prominent helix may be avoided.

The object of the surgeon will be to overcome the effect at the superior outer aspect of the ear, with the removal of as small amount of tissue as is possible when the ear is small, and a greater amount when the ear is large. The shape of the excision should be carefully studied beforehand and every effort made to place lines of union in shadowed situations.

The attached lobule can be dealt with in several ways. It may be cut free close to its attachment and the pointed extremity turned upward and inward so that it is given the desired rounded appearance of the normal lobule. Sutures carefully placed to close the small raw surfaces left will prevent much scarring.

Small flaps of skin may be formed on the side of the head and on the lobule so that the scars of union are thrown entirely in the shadow, that is, can be seen only from behind. This operation may require a little careful manipulation of the tissues, but it will be worth the while of the surgeon to take considerable trouble to secure the best possible results as the

lobule has much to do with the appearance of the organ.

Othematoma or Hematoma.

When recent, othematoma or hematoma should be drainage of blood and serum from beneath the skin, the cavities formed should be syringed with the chinosol normal salt solution and the ear encased in the plaster dressing described. Incisions for drainage should be as short as possible and situated as inconspicuously as possible. These incisions properly made need not be sutured. After syringing the cavities free from blood clot and serum, the skin is carefully adjusted before the plaster dressing is applied.

Sebaceous cysts and fibrous tumors are excised from the ear in the same manner as from other parts of the body, the skin incisions being made in as inconspicuous situations as possible. Keloid should be treated with x-ray and radium.

Repair of Clefts and Fissures of the External Ear.

The most common form of cleft or fissure is that formed by the tearing out of an earring. Proper treatment at the time of injury prevents formation of a fissure. A surprising number of surgeons will allow these lesions to heal without properly suturing them and when healing has been completed it

is necessary to reopen the healed edges of the wound and resuture separated parts. The scars formed by healing should be studied and line of suture should be so placed as to leave a scar as inconspicuous as possible. Sometimes tissues are lost and it may be necessary to operate and draw tissues from adjacent parts of the skin to add to the bulk of the lobule. In some instances when a portion of the edge of the lobule is noticeably scarred, this scar tissue should be so loosened that it will be behind the ear and the line of union on the outer surface of the lobule should be smooth and as free from scar as possible.

CHAPTER XXX.

SKIN GRAFTING FOR THE CORRECTION OF FEATURAL IMPERFECTIONS.

The inexperienced surgeon may feel that the skin grafting furnishes a means of correcting many featural imperfections, but such is not the case. Skin-grafting must be looked upon as an expedient for the overcoming of the most unsightly deformities only, as it is usually impossible to secure a natural looking surface after grafting. Following burns and injuries of portions of the body usually hidden by clothing, grafting furnishes a means of securing dermal covering which may be entirely satisfactory, but this is due to the fact that the patient who has an irregular and unusual appearing surface upon his leg or body is little concerned so long as it is painless and otherwise not troublesome, but about the face it is different as skin-grafts usually show plainly enough and are only a partial correction of the deformity which it is their object to replace.

The excision of a lesion or scar may be followed by immediate suture of the edges of the deficiency in some cases. This may be true especially if the edges of the wound are undermined. Undermining is accomplished by the passage of a blunt or fairly dull

cutting instrument beneath the skin separating the skin by burrowing through the subcutaneous tissues. The undermining should always be through the subcutaneous tissues. No effort should be made to separate the layers of the true skin. Separation without cutting is preferable to the sharp dissection of the tissues, as blood-vessels frequently resist the trauma incident to the separation and the margins of the wound secure a better blood supply in consequence.

Distortion of the features by undermining or flap formation may prevent the operator from closing certain deficiencies by immediate approximation of the edges, and in such cases skin-grafting may be the only means of closing a skin interval unless the wound be permitted to heal from the edges.

Healing of a raw surface by granulation must necessarily leave considerable scar formation. This manner of healing may be unavoidable, in certain cases, following injuries, and in such instances the medical attendant can do much toward the formation of a smooth and sightly scar by the proper care of the raw surface.

A granulating wound left by a burn or extensive injury which is not to be covered by grafts should be irrigated thoroughly with either a dilute iodin in normal salt, or a chinosol solution. Both these solutions are actively germicidal and when the surfaces

are thoroughly cleansed, they should be dressed with gauze dampened in one or the other of these solutions. When chinosol is used it should be about 1 : 5000 in normal salt solution, the iodin may be about 1 : 4000, if the wound is not sealed with silk or other impervious material. Dressings which exclude the air entirely have not found much favor with the writer. When no silk or rubber is used it is true that dressings must be dampened rather frequently, but this inconvenience is more than made up by the better results which follow.

Iodin solutions have been highly commended for their effect in stimulating epithelial cells. With iodin or chinosol solutions tendencies to the development of exuberant granulations do not occur. Smooth healthy granulations cause healing with smooth scars which are seldom unsightly. A smooth scar as a rule is more natural appearing than a grafted area.

CHAPTER XXXI.

MODIFICATION OF FEATURAL TYPES.

The greatest degree of success, no doubt, can be attained in featural surgery by one with an eye for artistic beauty, who has knowledge of correct proportions in features and who in addition is also a skillful surgeon.

Beauty is not necessarily dependent upon correct proportions of features. Many women with irregular features have great charm, properly enough they are classed as beauties. Of course, artists criticize such classifications, they would admit that such women have charm but they deny they are beauties from the artist's standpoint. The featural surgeon cares little for the quibbles of artists as to what really constitutes a beauty. If the women have irregular features and such irregularities are pleasing, the featural surgeon has no desire to alter such features. It is the irregularities which destroy charm which the surgeon would alter.

To decide the effect of a deviation of a feature from normal proportions, it may be necessary to do much study of the features of the patient. An excellent way to study many of these patients is with well made sets of photographs. These should be of two

general kinds, sharp focused views which give much detail, and vague, partly out of focus studies which show only the general characteristics of the features. The first type should be made with a commercial camera, rather than the usual portrait camera; the second type may be made with any good camera not quite in focus.

To study features effectually as above outlined a considerable number of pictures are required, and in doubtful cases where single features are not strikingly at fault, the method is of decided value to the surgeon. Photographs allow best possible measurements of the features to be made. With pictures of a standard size, a measuring frame is used and many different measurements quickly and accurately noted.

When the surgeon by a study of this kind has decided that certain features can be altered to advantage, he may before testing his conclusions upon the patient have negatives of certain photographs retouched so that the features which he expects to alter are shown in the altered state. Clever retouchers can easily do this. The surgeon thus may see what actual effect would result from his proposed operation.

Every expression or featural characteristic which a patient shows offers opportunities for modification. Whether or not such modification will be advantageous is for the surgeon to decide. If photographs re-

touched show that such modification alters the features in a way that is likely to be pleasing, the surgeon may institute those surgical measures to secure such effect, provided such modifications are within the limitations of his ability. A slight change in a line or feature in one patient sometimes does more to give that patient charm than the alteration of a gross defect of feature in another patient.

Measurements which are useful for determining what is considered correct featural proportions can be obtained by a study of books prepared for artists. Such works are useful to the surgeon in cases where lack of charm is due to deviation from such proportions. But measurements may not reveal the fault, for too often both in men and in women unpleasing featural effects are due to faults in expression.

No one can study better faults of expression and no one will be able after study to tell as well as the trained featural surgeon what influence faults of expression have in marring beauty. Many women who present themselves to featural surgeons for alteration of certain features can secure the charm they desire not by surgery but by a change of expression. It is the duty of the surgeon to see this. It is his duty to tactfully advise the patient. By careful advice he can, without offense, establish a system of muscle exercises which will alter such expressions. He can have the patient assume various expressions,

point out those which are advantageous, that is, charming, and help the patient to cultivate such expressions until they become fixed habits.

A volume of no small proportions might be written upon the study of featural types, but the brief mention in the preceding paragraphs will serve to make clear the point, that there is much more to featural surgery than mere surgery. How little does the average surgeon suspect this! So often we see the advice to patients seeking information regarding featural surgery, "Go to your family physician, let him send you to a surgeon." Nine times out of ten the family physician will send the unfortunate patient to a general surgeon, one perhaps who does his appendicitis work, and nine times out of ten this general surgeon has not even a passing interest in this class of surgery. But general surgeons are ever ready to do any kind of operation. Courage is the basic essential to general surgery, but courage does not make good featural surgeons. It is only by careful study, a broad understanding of the subject, and the display of much skill that the best effects are possible in this branch of surgery. It is a virgin field, one which is crying for the scrupulous surgeon. It is not the field in which the specialist can be developed in four weeks. No short postgraduate course gives the skill needed. Time, patience and careful study will fit the surgeon

to do this work well. Early efforts must be discreet. That which appears difficult or impossible becomes practicable as the surgeon develops, and develop he will if he gives the subject the attention it deserves. As any difficult art is mastered, so the field of cosmetic surgery widens with skill and experience. The technical difficulties of operations upon the face are usually not great. They demand care, exactness and particularly attention to detail. These are possible to any man; they are a matter of training. The surgeon who succeeds as a specialist in this field must take a great deal of trouble preliminary to operation. He needs to be equipped with an understanding of his case which few people suspect. He must conduct his surgical maneuvers with the most absolute care and exactness as to details and assure aseptic healing by a technic which leaves nothing to be desired. Under such circumstances he can most often produce effects which will be a source of satisfaction and even happiness to his patients.

CHAPTER XXXII.

CONCLUSION.

Cosmetic surgery, now attracting a good deal of attention, is a subject old to the writer. For this reason his opinion may be of interest to surgeons more recently interested in the work.

From 1903 to 1907 the writer contributed many articles to medical journals and in this latter year brought out his book on Cosmetic Surgery. This was a work devoted exclusively to this class of surgery. It placed in compact form before the profession descriptions of numerous surgical operations of the kind which the writer had described in various medical journals during the four or five preceding years. The book itself like the present volume avoided descriptions of old plastic surgical procedures which are available in all works on surgery and was confined to essentially "beauty" operations, largely developed by the writer to meet the demands of the times.

Since 1907 there has been a great deal of cosmetic surgery done by ranking surgeons in all our medical centers, but few indeed of these surgeons care to write even articles for the medical press upon the subject. This, of course, is due to the desire of these

surgeons to escape criticism by their professional brothers, for like all new specialties, cosmetic surgery has been subjected to criticism. Much of the cosmetic surgery of our leading surgeons is poorly done. When one stops to consider the circumstances this is readily understood. General surgery does not necessarily develop those qualities which foster good cosmetic surgery. Few general surgeons fail to acquire a habit of operating rapidly and hasty work is not smooth, perfect surgery such as is demanded in featural operations. Very careful incising, excising and suturing are essential to good results in featural surgery. The method of suturing alone usually adopted by general surgeons will effectually mar the results of a featural operation if practiced as it is nearly always practiced by general surgeons. Irregularity of incisions, sutures too deep, too wide apart and drawn too tightly will give a very poor surgical result upon the face when the same technic would be satisfactory on any other part of the body. As these details are not available to surgeons generally, they cannot be expected to observe them in operations. It is for this reason that the writer hopes even expert surgeons may find matter of interest in this volume.

Plastic surgery presents endless possibilities. Surgery usually calls for a fixed technic, but plastic surgery allows, even requires, the meeting of numerous

deviations by modifications of the usual technic. Attempts to describe all such variants are unnecessary for a good understanding of the subject. The present work includes a variety of modifications of many of the operations described, but no attempt has been made to include all possible operations of the face, as the book is intended more as a working guide to interested readers rather than an exhaustive consideration of the subject. Such steps as the author considers important have been emphasized, sometimes causing more or less repetition.

While it is important to know how to cut and how to suture and how to effectually secure an insensitive field, it is also important that the surgeon study his prospective patients and learn to estimate just what surgical procedures are likely to be satisfactory in each case, for surgical operations which are perfect successes in some people's estimation are failures in the estimation of others. Cosmetic surgery presents striking examples of this. Few surgeons care to promise to do more than they really can do, therefore, it behooves the operator if he expects to give satisfaction to advise his patient as to just what to expect. Some operations for altering featural conditions can be done without causing any scarring upon exposed parts. These operations which include subcutaneous sectionings, operations within the mouth and nose, and operations beyond the hairline

are always operations of choice to conscientious surgeons. The second group of operations include those which place scar lines in shaded areas; the third group includes those in which the natural lines are followed, and finally the fourth group, in which incisions are made irrespective. It is foolish for a surgeon to pretend that he can consistently operate and avoid scars. Sometimes scar lines are so trifling that they can be said to be invisible, aseptic healing of properly made and closed wounds usually leaves very insignificant scars, but patients should be given to expect some subsequent scar lines after operations on exposed regions. Tissues brought together under tension nearly always leave distinct scars. Such wounds should not be made on exposed surfaces unless the patient is given to expect this result. Of course, it is possible sometimes to avoid much scarring by a type of double operation. The operator excises the tissues and draws the wound edges together under tension, placing his stitches close to the wound edges, removing them early to avoid stitch marks. After the tissues have adjusted themselves to the new conditions the noticeable scar left by the first operation is excised. The tissues when adjusted by time can afterwards be brought together with little tension and the scar line usually perceptibly improved. A few surgeons may not scruple to excuse excessive promises with the plea that they can thus attain a

result. Such reasoning is chicanery, if the patient is not fully warned beforehand that this is the plan of the surgeon, for even present temporarily a rather noticeable scar may cause a psychic trauma which may permanently unsettle the patient's nervous equilibrium.

Cosmetic surgery, like all new specialties, has suffered from the influx of more or less incompetent opportunists who are looking for a surgical field which is not overcrowded. This is the history of all new specialties. Such operators may promise anything to secure patients. In the long run such practices result in failure of the operators. The surgeon who hopes to continue in this field of surgical endeavor will do well to develop a conscience and strive consistently to establish a reputation for veracity. Even then he will have to learn to discriminate in the selection of patients.

Cosmetic surgery appeals to vain people. There are many idle men and women who have nothing to do but study themselves. These people are frequently extremely neurotic and selfish. They will expect marvelous transformations from operations. If the surgeon in this field expects to enjoy peace of mind in his practice he will carefully study character and learn to avoid these psychopaths, for with nothing to do, after an operation which would prove satisfactory to a reasonable person, such patients

may work up a degree of discontent which is appalling in its intensity.

Sometimes women consult, seeking operations which they desire performed without the knowledge of any in the family. Most of these are women who are dependent upon their husbands. They may have a real need for all their charms and it may be good policy for them to have operations performed which will restore to them more or less of their lost youthful appearance. While such patients may have a right to have such operations performed without their husband's knowledge and consent, they are seldom in a position to maintain such right and it behooves the featural surgeon to consistently refuse to be party to any such arrangements.

Professional beauties make up a certain percentage of the patients who consult the featural surgeon. These women in America must retain youth. The most beautiful women of middle life cannot charm American audiences. Signs of maturity in women must go. Featural surgeons can do much to perpetuate youthful contour, but usually it cannot be accomplished without a good deal of scarring, for most of the surgical steps which accomplish these effects require the excision of rather large segments of integument. So long as too much effect need not be produced the surgeon can hide his scars within the hair, but time makes more and more demands for

sacrifice and finally the surgeon must come out in the open. When he does he should advise his patient frankly. Women who otherwise would be retired from public appearance will accept as a choice scars which they must subsequently hide with cosmetics. They may prefer such scars and contracts to no scars and no contracts, but they should have the right to so elect. The featural surgeon if he is what he should be will only operate after advising them to this effect.

The variety and extent of the operative steps which are used in some instances for the sole purpose of restoring youthful lines is little suspected even by surgeons. It is no uncommon thing to see women who have been operated upon by our best general surgeons, and to find the latter performing operations which are entirely inadequate, merely because they have no way of knowing just how much tissue it is necessary to remove to lift or retract the features. Using their own judgment, and not having done enough of this work to acquire the necessary experience, they perform operations which disappoint their patients merely because they do not remove anything like the amount of tissue which is necessary to secure a noticeable effect.

It is no uncommon thing to see in other cases the results of hastily performed operations which are far from satisfactory. Patients will present where in-

cisions have been made hastily and closed imperfectly. The scar lines are literally tell-tale. One can actually picture the operation, the manner of the surgeon, his way of incising and his way of closing. The same may be said of the operations involving the excisions of tissue, soft parts, bone or cartilage. An unnatural irregularity tells forever after of the hasty imperfect technic of the surgeon. The writer would feel repaid for the considerable trouble it has been to rewrite this book if he would, by his warnings, prevent surgeons from attempting to do these operations without taking the extreme painstaking care which is essential to really good results. No one knows better than the writer how flagrantly vicious is much of the criticism of cosmetic surgeons. Surgeons of nimble wit who wish to secure patients for operations upon the face do not write about despised and criticized beauty operations, but seek publicity in the medical press by descriptions of plastic restorations of gross deformities. Individual operations on gross lesions are described in detail, operations a century old are re-phrased as original contributions, and the slightest modifications in procedure put forward with emphatic seriousness. It is the right of surgeons to tabulate their experiences. They are often interesting if not particularly valuable. That such methods are effective in advancing a surgeon's reputation as a featural surgeon, more than one operator can testify.

In spite of criticism it devolves upon some one to describe the various operations demanded today to satisfy the desires of so many for an altered appearance. When the writer was contributing to medical journals fifteen or twenty years ago, articles describing operations as they have again been described in the present volume, he was subjected to criticism which was actually censorious. In one way he felt flattered for his own knowledge of medical history reminded him of the numerous dull savage books written by contemporaries of Pasteur criticizing this man's greatest discoveries. Of course, he who contributes to the literature of cosmetic surgery can make no claims to greatness, for the operator who gives a few added seasons to an actress by helping her to counterfeit youth cannot seriously lay claim to rendering distinguished service to the community, but the exactions of this kind of surgery are such that the operator who applies himself carefully to attain really good results will be inspired by his work, as all men are who attempt difficult tasks, and there are many compensations to the surgeon who masters the details and does well these operations. The flare of enthusiasm which comes to the operator who discovers that he has mastered the difficulties and is enabled to do superior featural operations may inspire him to announce himself as a specialist in this field of surgery, but it is the humble suggestion of

the writer that while general surgery is only a partial training to the featural surgeon, the mastery of featural surgery in its finer details develops surgical technic which makes of adept featural surgeons superior types of general surgeons. So it is the suggestion of the writer that the featural surgeon should not exclude himself from the field of general surgery, for as one grows older one finds more satisfaction in doing operations which cure disease rather than those which merely satisfy vanity.

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